Global Citizenship Education in Social Virtual Reality for Future English Teachers

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Abstract

This paper explores the potential of Social Virtual Reality (SVR) for Global Citizenship Education (GCE) as a transformative approach to English teacher training and EFL teaching. Given the increasing interconnected nature of our world, this paper investigates how SVR can enhance the development of global competences and cultural awareness in pre-service English teacher training. By immersing learners in cross-cultural experiences and collaborative learning environments, SVR offers a unique pedagogical opportunity to foster global citizenship competences such as openness and curiosity to participate in a global society. This contribution presents the results of the interdisciplinary research project "CoTeach – Connected Teacher Education," in which different disciplines, including foreign language teaching and human-computer-interaction research, collaborated to develop innovative teaching approaches for future teacher training.

Keywords: global citizenship education; virtual reality; teacher training; foreign language teaching.

1. Introduction

The project "CoTeach – Connected Teacher Education" is centered on the systematic and interdisciplinary collaboration among educational sciences, and different teaching methodologies, placing a specific emphasis on Human-Computer Interaction for the creation, design, and evaluation of innovative learning environments (cf. Wienrich et al., 2020). The specific focus of the presented research project within the scope of this contribution lies in the utilization of fully immersive learning environments for exchange and collaboration in the context of cross-cultural encounters in foreign language learning and teaching.

The societal evolution towards a cosmopolitan and open-minded community necessitates that students possess attitudes and competences enabling them actively participate in a global and diverse network. This encompasses knowledge about the diversity of community members, the

cultivation of open and tolerant attitudes towards differences, and the ability to communicate and interact respectfully and constructively. As an integral part of modern English teaching, it is the responsibility of educators to impart this knowledge, skills, and attitudes to students.

Virtual reality now introduces an entirely new learning space in the English classroom. In a virtual environment, learners have the opportunity to assume roles and actively shape the learning content. Through social virtual reality, students engage in collaborative negotiations of meaning, interacting and communicating with each other in a protected learning space. This contribution illustrates the possibilities that social virtual reality can bring to the English classroom, fostering understanding and empathy while counteracting prejudice and exclusion as integral components of global citizenship education.

2. Global Citizenship Education in the EFL Classroom

Within the framework of the 17 Sustainable Development Goals, the United Nations (2016) advocate, as part of quality education, that all learners acquire knowledge and competences to actively shape a peaceful and diverse society. In this context, the appreciation of cultural diversity and one's own cultural identity also plays a crucial role:

> By 2030, ensure that all learners acquire the knowledge and skills needed to promote […] a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development (SDG 4.7, United Nations, 2016).

In the context of English language teaching in Germany, there are points of connection to the competence area of inter- and transcultural learning, a facet that has undergone further refinement in recent scholarly investigations to include the field of global citizenship education and a language pedagogy that is critical of racism (cf. Braselmann et al., 2021). Central to intercultural learning are three pillars: knowledge, skills, and attitudes. The focal point lies in learners acquiring cognitive, affective, and conative competences engaging with other cultures, coupled with their ability to reflect on these competences in relation to their own cultural identity (cf. Byram, 2021). In contrast, transcultural learning diverges from a more rigid binary framework, opting for a perspective that perceives culture as a dynamic and evolving construct (cf. Eisenmann, 2015).

The paradigm of global citizenship education introduces a fourth dimension to the areas of knowledge, skills, and attitudes. In this fourth dimension, learners are encouraged to use their acquired knowledge and competences to actively play a shaping role in their everyday environment inside and outside the classroom. This transforms learning into a sustainable experience, where learners grasp the relevance of the subject matter for their living environment.

UNESCO's (2015) model for global citizenship education delineates three distinct domains within this competency structure: cognitive, socio-emotional, and behavioral.

To make the learning experience tangible in real-world significance for the learners, exchange situations, where learners interact with other individuals, present themselves as suitable. Virtual reality opens up an additional learning space where learners, through embodied experiences, gain proximity to the subject matter and other learners.

3. The Potential of Social Virtual Reality for Foreing Language Teaching

The presented research project employs fully immersive technologies, specifically VR headsets with a 360° display and specialized gaming laptops. The chosen program is the social VR platform "ViLeArn" (Latoschik et al., 2019), developed at the University of Würzburg. This approach involves users interacting with one another in a virtual space, with tasks focusing on communication and collaboration.

The primary goal of the virtual reality teaching unit is to enable learners to apply their VR-based learning experiences to the real world. Only under this condition does learning in VR align with the sustainability concept. In the broader context of Virtual Reality, its potential is described as providing a "secure and regulated environment in which students can explore diverse perspectives and identities without the fear of adverse consequences" (Singha, 2023, p. 11).

In a social VR environment, learners operate as avatars alongside others, engaging in verbal communication, moving within the virtual space, demonstrating actions and interacting with objects. In the field of foreign language education, the potential of social virtual reality (VR) lies in its capacity to facilitate genuine and varied teaching and learning scenarios, granting students a considerable level of autonomy in their learning journey (cf. Steinbock et al., 2022). Moreover, social VR provides the opportunity for an immersive encounter with a situation, allowing learners to gain a firsthand perspective and actively participate in an experience that would otherwise be limited to observation from a third-person viewpoint.

Regarding global citizenship education in the foreign language classroom, students not only acquire knowledge from various perspectives but are also encouraged to cultivate empathy, embrace different viewpoints, and recognize similarities both at a societal and personal level. The subsequent model illustrates how the concept of global citizenship education and the potential of social virtual reality interplay in English language teaching.

4. Global Citizenship Education in Social Virtual Reality

To visualize the mutually beneficial relationship between global citizenship education and social virtual reality, we propose a model that seamlessly blends the UNESCO-proclaimed framework with the potentials of virtual reality tailored for the English language classroom (see Fig. 1).
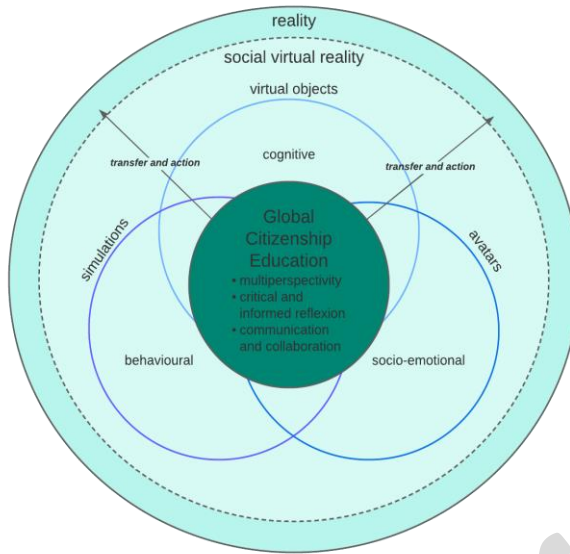
Global Citizenship Education in Social Virtual Reality

Figure 1. Model of Global Citizenship Education in Social Virtual Reality (GCE-SVR).

The model delineates its primary focus on advancing global citizenship competences in virtual reality, presenting it as a central objective. It describes this objective in terms of gaining multiperspectivity, engaging in critical and informed reflection, and cultivating skills related to communication and collaboration. These goals are substantively shaped by the three domains of global citizenship competence, and they are implemented through three tools in SVR: virtual objects, avatars, and simulations.

The model posits the permeability of boundaries in the context of social virtual reality, signifying an anticipation that learners will transfer the competences, attitudes, and acquired knowledge from VR to real-world situations and act according to these parameters. The subsequent elaborations provide a detailed insight into how the VR tools align with the learning objectives of global citizenship education.

4.1. Virtual Objects

The UNESCO (2015) characterizes learners under the cognitive domain of global citizenship education as "informed and critically literate" (ibid., p. 29). For instance, students may learn about the impact of climate change on both local ecosystems and the global environment. They might critically analyze the interconnectedness of economic systems at local, national, and international levels.

In the context of virtual reality, objects play a crucial role in facilitatating communication. Users can engage in discussions about local and global topics by manipulating virtual objects, they

can visualize personal connections and meanings. In a three-dimensional space, objects can become part of an exhibition on issues and collaborative approaches. The use of stereotypical objects can reveal biases and prompt critical reflection. The personal significance of various objects can foster multiperspectivity.

4.2. Avatars

Learners possessing global citizenship competences should be "socially connected and respectful of diversity" in the socio-emotional domain (ibid.). Not only can learners of diverse cultural identities meet in virtual reality embodying avatars, but also the assumption of roles with different cultural backgrounds is an intriguing aspect of learning sessions in VR. For instance, in an anti-racist context, learners may engage in virtual reality (VR) environments where they interact with avatars representing diverse cultural identities. In such settings, they can experience firsthand the richness of different perspectives and backgrounds. This immersive experience goes beyond theoretical understanding, allowing learners to witness and engage with cultural diversity in a meaningful way.

Moreover, the adoption of roles with various cultural backgrounds within VR learning sessions enhances the anti-racist dimension. For example, a learner might assume the role of a character from a historically marginalized community, providing them with a deeper understanding of the challenges and experiences faced by individuals from that background. This not only fosters empathy but also encourages learners to challenge stereotypes and biases, promoting a more inclusive and anti-racist mindset.

In this dynamic learning environment, learners not only gain a broader perspective but also develop attitudes through critical and informed reflection. They can actively analyze and question their own biases and preconceptions, leading to a more profound appreciation for diversity and a commitment to anti-racist values.

4.3. Simulations

In addition to cognitive and affective competences, conative competences play a crucial role in enabling learners to apply their acquired skills beyond the learning environment. This ensures that they become "ethically responsible and engaged" (ibid.). For instance, a student proficient in critical thinking and emotional intelligence (cognitive and affective competences) should also possess the conative competence to apply these skills in real-world situations, such as ethical decision-making in professional settings.

To effectively transfer skills obtained in virtual reality (VR) to the real world, it is essential to create virtual scenarios that closely mimic real-life situations. The more realistic the virtual environment, the more seamless the transition of skills to the real world. If the virtual environment closely aligns with real-world circumstances, users may struggle to distinguish

between the real and the virtual. This phenomenon is highlighted by Wiepke (2022, p. 43), who notes that the brain categorizes virtual stimuli as if they were real. Learning scenarios that mirror everyday life, especially those involving communication and interaction, contribute significantly to skill transfer. This is particularly beneficial in a virtual teamwork task where students with virtual avatars collaboratively solve a problem – the embodiment experience enhances their sense of presence and engagement, creating a more authentic learning environment.

5. Practical Implementation: Advanced Seminar for Future English Teachers

Within the context of the presented project, a framework was devised for the design and implementation of a university seminar focused on the pedagogy of foreign language instruction. This development occurred through a structured process encompassing three distinct cycles. The aim of the advanced seminar was to equip future English teachers with the requisite knowledge and skills to independently develop lesson plans aimed at building global citizenship competences with social VR.

The seminar sessions were structured to commence with a succinct thematic overview delivered by the lecturer, followed by the opportunity for students to autonomously select additional, in-depth learning units through learning modules provided on the university-wide platform. The individual learning modules included guiding questions to facilitate students' navigation through the provided materials. For instance, the learning module on "Inter- and Transcultural Learning and Global Citizenship" included thematic blocks such as "A Model for Intercultural Communicative Competence" (Byram, 2021), "Crossovers – Postcolonial Literature and Transcultural Learning" (Eisenmann, 2015), and "Ecology, Cultural Awareness, Anti-Racism and Critical Thinking: Integrating Multiple Perspectives in Foreign Language Teaching" (Braselmann et al. 2021). Following the exploration of these modules, students generated lesson ideas, which were subsequently organized and synthesized into a methodology map, which serves as a tool for the systematic description and categorization of various lesson plans (see Fig. 2).
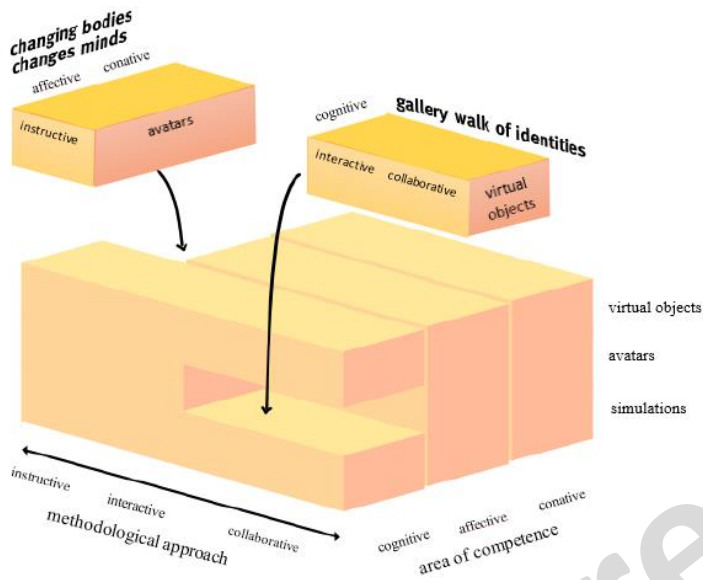
Global Citizenship Education in Social Virtual Reality

Figure 2. Methodology-Map of Foreign Language Teaching in Social VR (Steinbock et al., 2022).

Figure 2 exemplifies the categorization of two lesson ideas developed by students. The lesson unit titled "Changing Bodies Changes Minds," where users worked with different avatar appearances to reflext on stereotypes, adopted an instructive methodological approach with the aim of acquiring affective and conative competences. The second lesson idea titled "Gallery Walk of Identities" involved the use of virtual objects that users arranged into an exhibition about personality and culture. It was followed by an interactive and collaborative approach, targeting cognitive learning objectives.

6. Conclusion

For English teacher training, the integration of VR tools, such as avatars, virtual objects, and simulations, holds significant implications. By incorporating these technologies, English educators enhance the learning experience for their students. Virtual reality provides learners with unique opportunities to explore diverse perspectives, interact with others, and actively participate in cross-cultural scenarios. The emphasis on multiperspectivity, critical reflection, as well as communication and collaboration aligns with the goals of global citizenship education, encouraging learners to become informed, socially connected, and ethically responsible individuals. This innovative intersection of foreign language learning and virtual reality opens new avenues for preparing learners to navigate the complexities of a globalized society.

In light of these advancements, it becomes imperative for English teacher training programs to incorporate elements of virtual reality and global citizenship education. This not only ensures that educators stay abreast of the evolving landscape but also empowers them to prepare their students for a future where digital tools and global perspectives play a crucial role in language learning and beyond. Hence, ongoing attention and research in educational discourse should be directed towards the exploration and advancement of global citizenship education in the field of social virtual reality.

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