SocialVR in art education – from immersive excursions to collaborative creativity

Abstract
SocialVR offers new ways of reception and creation of art with platforms for joint exploration, cooperation and presentation. Creation and perception of art now is intertwined with the impression of virtual embodiment in shared environments. In this workshop we present a classification of Social VR for art educational concepts integrating practice-oriented considerations, from art educational tasks to mobbing prevention. We discuss ways how Social VR specifically contributes to art educational concepts. Where is the potential and challenges looking at both receptive and productive applications? This workshop builds upon our previous study, XR-based art educational formats in historical spaces [1].

CSS Concepts
• Applied Computing->Education; Arts and Humanities; Human-centered computing; Collaborative and social computing

KEYWORDS
SocialVR; art education; immersive designing; idactic framework; Ethical Challenges
Introduction

SocialVR in art education enables exploring and designing within VR-space. Opportunities lie in heightened accessibility to cultural heritage as well as new forms of guidance within virtual worlds. Visiting digital twins of cultural heritage or art exhibitions now becomes a new experience embodied via VR and interconnected with a growing SocialVR-network.

The avatar is a vital core element of SocialVR, from designing digital identities to sensomotorial feelings along with the avatar’s explorations. Teachers need to be aware of physio-psychological effects of VR, e.g. when the sublime impression of teleporting through architecture shifts to cybersickness. As compared to single VR experiences, what is unique is the strong experience of social presence with potential for cooperation, from joint drawing or designing environments. There is a growing choice in SocialVR platforms apt for art educational purposes with highly intuitive avatar-design options or guided tours. Joint creation is enabled in MasterpieceVR or Unbound Alpha. Yet, art educators need to carefully select their ideal SocialVR platform for educational purposes. Selection criteria may be mobbing prevention or scalability addressing heterogeneity in terms of media competence.

Related Work. Research on Virtual Worlds and Social/VR in art education

Research in SocialVR with relation to art education is scarce, but promising. Regarding architecture training, both the collective mode as well as VR modality contribute to problem solving and spatial cognition [13]. Developing a framework for collaboration in VR [14] was a vital step towards current SocialVR platforms. Looking at studies on SocialVR’s predecessors, there are research projects in desktop-based virtual worlds as well as VR-based projects. Regarding desktop-based Virtual Worlds in art education such as Second Life, art students expressed less inhibition in presenting or commenting on each others artwork (c.f. research by Lu) [8]. Virtual Worlds may be regarded as platforms for avatar-based identity exploration c.f. didactical framework by Yoon [9]. There is an increasing number of VR-based high-quality projects which would provide opportunities for educational research, e.g. KLIMT MAGIC GARDEN, a VR project on Gustav Klimt’s Beethoven Frieze [10] or...
Now, art-interactors in SocialVR concepts (Nr. 4) refers to users engaging in art work as integral component. For example, the participatory VR artwork *Flock* (David Lobser, 2017) is reflecting on VR and social alienation with VR-users meeting as virtual birds (Figure Nr.5). Such art concepts may fuel inspiration for pupils` own SocialVR-art projects. The concept individual designers (Nr.5) refers to individual creations for VR-environments. Designing unique avatars or creating environments on SocialVR platforms or participating in exhibition competitions may be interesting. Now, codesigning within SocialVR refers to a collaborative interface for joint designing (Nr.6). This fusion may trigger “a unique feeling of symbiosis and potential for constant mutual inspiration” [18]. VR drawing platforms offer a variety of ready-made modules or algorithmic functions as well as variety of tools, from painterly to sculpting mode for quick visual effects c.f. Figures 6/7.

Figure Nr.5 Classification of SocialVR in art education, Overview by authors

SteamVR Museum of Fine Art [11]. Now, Peez/Meik are pioneering in art educational research of VR-painting, exploring the specifics of the medium in a qualitative case study with the VR-painting software Google Tiltbrush [12]. Peez et al see a potential of designing within endless spheres with options for multiperspectivity but also challenges when it comes to precision or navigation. In our previous study on XR in art education, students created emorials in VR drawings on Bavarian Revolution (1918/1919) c.f. Figure Nr. 3. Red clouds represent ambivalence of violence and communism in the revolutionary [1]. As compared to such single VR drawing concepts, SocialVR now may provide embodied exploration, but also joint design of future actual memorials as participatory platforms of commemoration culture.

**Classification: SocialVR in art education**

The following classification is suggested as framework for further art educational research and implementation (Figure Nr. 5). Nr. 1-4 address variations of VR-based receptive/interactive forms of art education, Nr 5-6 refer to variations of designing for or within joint VR-spaces. SocialVR as individual exploration of art exhibitions (Nr. 1) refers to autonomous art educational explorations as offered in SocialVR. Differences are higher flexibility (time/space) and intimacy as compared to actual visits c.f. The VR Museum of Fine Art (SteamVR) e.g. Terracotta Army [11]. SocialVR as guided art educational concept (Nr.2) resembles museal guides, yet now guidance is offered by an avatar in SocialVR. Examples are *Media Art Exhibition* by Lab Gree 2018 (VRchat) [15] or Sansar’s guided tours, e.g. the Egyptologist Dr Martinez as avatar guide in high quality scanned environments (Figure Nr 1) [16]. SocialVR offers new options in terms of deictic information (situated referencing) and swift teleporting in multiperspectivity e.g. for stylistic comparison.

Virtual Visitors in actual spaces (Nr.3) refers to forms of exploring spaces which are still existing, yet which are hardly accessible and now offered as remote visit (e.g. via drones or robots). Such remote exploring may increase experiences of exploring authentic spaces of cultural heritage as compared to fully computer-generated virtualisations. Examples are still preliminary strong in academia (e.g. the Project ROVINA) [17].

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**Conclusion**

As platforms for immersive joint exploration, SocialVR transforms ways or reception and creation of art.
SocialVR intertwines social and spatial presence, providing high potential for embodied experiences. Hybrid creativity, mutual learning or site-specific learning are possible in new ways of embodiment. Ad-hoc-voyages to cultural heritage or actual feelings of the sublime within SocialVR. Immersive social platforms are matching pupils’ (social) media culture with autonomy and connectedness, the avatar as alter ego for identity exploration. Yet, looking at mobbing or sensorial stimulation, further research is vital to provide safe and substantial concepts of art education in SocialVR.

**References**


