Introduction
This study seeks to evaluate the restorative impact of pre-service teachers’ online engagement in a simulated natural world environment. Immersive natural environments provide a means of restoration for adults and may present benefits for pre-service teachers who are unfamiliar with the natural world. The use of restorative virtual environments could be extended to schools in urban areas in particular, allowing pupils and their teachers to undertake field trips, and to relax in a calming and restorative context.

Aims and Method

Aim of the study: was to determine whether immersion in a simulated natural world environment would enhance the well-being of students by encouraging positive affective states and improving attentional fatigue.

Participants: 57 students participated in the study. The majority were undergraduate pre-service teachers. A small number (n=3) were postgraduate students undertaking Masters level study in education. Group 1 (n=5) undertook the survey and immersion experience in an on-campus computer studio. Group 2 (n=47) undertook the same experience online and at a distance from the campus.

Process: Participants were requested to complete Hartig, Kaiser and Bowler’s (2003) affective and behavioural measures of attentional fatigue for which participants selected answers on a 7 point Likert scale at the beginning and at the end of the intervention. Participants commenced the study by completing an online version of the inventory. After completion of the questions they were requested to spend 30 minutes on Rejuvenation Island in Second Life, walking around and exploring or sitting quietly in a favourite place. On completion of this this period participants returned to the campus and completed the inventory again. Ethics clearance for the study was granted, and all participants gave informed consent.

Findings

As shown in figure 1, the results give rise to an anomaly: post immersion, the level of reported tiredness and feelings of being worn out is lower, showing that the experience of immersion had led to a beneficial outcome. However, the reported level of irritation is higher post immersion as is the ability to make well balanced decisions, concentrate, foresee implications of complex situations and pay attention to long lectures.

Responses to open questions probing for more insight on experiences, however, indicated that the immersive experience had led to enhanced feelings of wellbeing: “The beach and waves were really calming.” Responses indicated that the island produced strong positive feelings in respondents, akin to being in a natural environment: “The experience allowed an escape from stresses of real life. Had a calming influence and I forgot about day to day worries while in the virtual world.”

However, other feedback made it clear that a lack of familiarity with virtual environments presents an obstacle and diminishes the beneficial impacts of immersion, with one participant noting: “I found it frustrating and very unrelaxing. For students who are familiar with this type of experience it may be restorative”. A third response indicated another layer of complexity: that the experience of exploring and feeling alone in a strange place may bring to the surface anxieties related to perceived ‘real world dangers’ “...at first I felt relaxed with the sounds and everything but soon afterward (10mins) I became very anxious, I didn’t want to explore.”

Conclusions

Immersive natural environments provide a means of restoration for adults and may present benefits for pre-service teachers who are unfamiliar with the natural world. The use of restorative virtual environments could be extended to schools in urban areas in particular, allowing pupils and their teachers to undertake field trips, and to relax in a calming and restorative context.

In today’s classrooms where pupils with autism or attention difficulties find the classroom context disturbing, a Second Life retreat may offer a calming and restorative respite. For an immersive experience to be untrammelled by the impact of the unfamiliar, and by the transfer of ‘real world’ anxieties about being alone in a strange place, it is recommended that visitors be accompanied on their first visit and supported until they become familiar with the navigation and interface of Second Life.

References