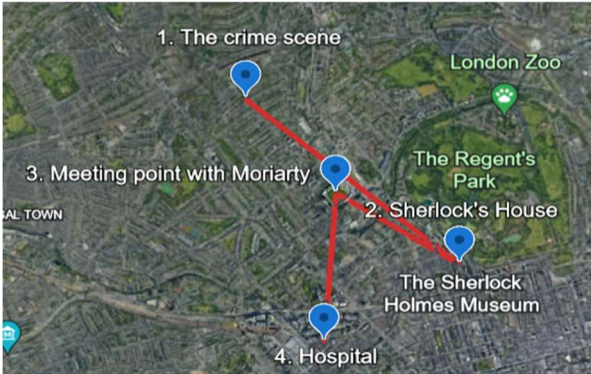


Appendices

Appendix 1. Description of intervention sessions

Durati on	Immersive Virtual Reality Intervention	Paper-based Intervention
45 mins	Pre-intervension session: Story writing revision: revision of key elements and methods in story writing and vocabulary revision. Sources: • English File Upper-intermediate, Fourth edition: Unit 8A (crime) • Guide for writing murder mysteries: https://www.wikihow.com/Write-Murder-Mysteries • Kahoot: https://create.kahoot.it/details/2c329866-379a-4af4-8c45-72f978803386	
5-10 mins	Motivational questionnaire	
10 mins	Google Earth technical guidance Sample story in Google Earth Source: https://earth.google.com/earth/d/1qoTNptTvcZ-sp_pWDZ-UH9VfE9R3_SoC?usp=sharing 	Observing paper-based tourist map Sample story on paper Students observe the map and the pictures with the descriptions. Source: https://citywalks.appspot.com/pdf/london/London-Attractions-Map.pdf 

70-75 mins	Google Earth Virtual Trip The students of this group will have to explore London in Google Earth and then write a detective story that takes place there. They can observe street views in this virtual environment. The students will get guiding questions to help them create their story. The students will choose detective names for themselves, so anonymity is provided. 	Traditional paper-based writing activity Students in this group get paper-based maps and photos with descriptions of London. They need to observe them then write a detective story that takes place there. The students will choose detective names for themselves, so anonymity is provided. 
35 mins	Revision and completion of the detective stories During this session students will have the chance to complete and refine their stories by adding more details or correcting mistakes.	Revision and completion of the detective stories During this session students will have the chance to complete and refine their stories by adding more details or correcting mistakes.
10 mins	Engagement questionnaire and student feedback	Engagement questionnaire and student feedback

Appendix 2. Sample story used for the demonstration

Sample detective story

This short story was part of the detective game I had designed with the Genially website during my teaching practice. I adapted the original version of the story I had written and marked its scenes in Google Earth with the purpose of demonstrating the use of this VR device. For the same reason, I chose not to further elaborate on the story.

Scene 01. Crime scene (Abbey Road)

No sooner had I arrived in London than I heard about the murder in Abbey Road. I travelled to the crime scene. The victim was a young woman. She had bruises on her neck. She was strangled with a scarf. It is so terrible! Poor girl, little did she know what was in store for her on Abbey Road.

Just as I was examining the body I noticed that something was ticking in the victim's pocket. It was a golden watch. I realised that I needed Sherlock's help. The next scene is at his house, but do you know where he lives?

Scene 02. Sherlock's house (Baker Street)

Sherlock told me it was Moriarty's watch. He must have left it in the victim's pocket on purpose. Sherlock advised me to check if there was a message in the newspaper for me. He was right, I found there a riddle written by Moriarty:

“Congratulations! You've found my watch. If you want to find me too, solve this riddle: 'Play me with a ball and bat or hear me chirp in a top hat. What am I?’”

Not until I had realised that the word “cricket” has two meanings did I figure out Moriarty's location. He must be in the Lord's Cricket Ground.

Scene 03. Meeting with Moriarty (Lord's Cricket Ground)

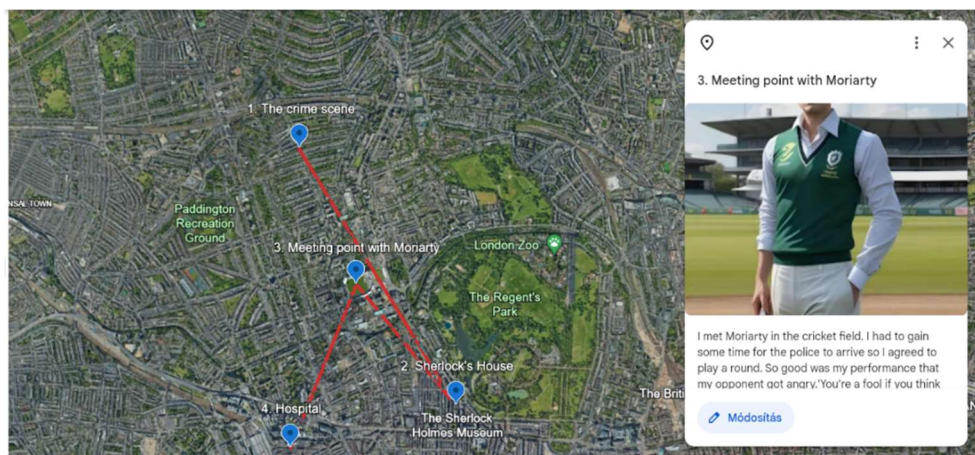
I met Moriarty on the cricket field. I had to gain some time for the police to arrive, so I agreed to play a round. So good was my performance that my opponent got angry. "You're a fool if you think you can defeat me" - shouted Moriarty, then he pulled out a gun and shot me in the chest.



Moriarty in the cricket field
(Image generated by Leonardo. Ai)

Scene 04. St. Mary Hospital

I woke up in a hospital. The police arrived a few minutes after I was shot, but Moriarty got away. Only now do I realise the extent of danger I was in. This time Moriarty managed to escape, but I'll make sure that his crimes won't go unpunished. See you soon!



My story web in Google Earth

Appendix 3. Motivational questionnaire and demographic questions

Digitális kreativitásfejlesztés az angol nyelvoktatásban: a virtuális valóság hatása a tanulói kreativitásra, motivációra és íráskészségre

1. Kérlek add meg az egyedi azonsítód (a detektívneved):

2. Mi a nemed?

☐ Nő

☐ Férfi

☐ Egyéb

☐ Nem kívánok válaszolni

3. Hány éves vagy?

4. Mi volt az előző félévben az angol nyelvi átlagod?

5. Kérlek jelöld, hogy mennyire értesz egyet a következő oldalon található állításokkal a megírandó detektív történetteddel kapcsolatban.

[illegible]

Alig várom, hogy lássam,
milyen teljesítményt
nyújtok ebben a
feladatban.

☐☐☐☐☐☐☐

Igazán keményen meg
fogok próbálni teljesíteni
ebben a feladatban.

☐☐☐☐☐☐☐

Ha sikerül megcsinálnom
ezt a feladatot, büszke
leszek magamra.

☐☐☐☐☐☐☐

Appendix 4. Engagement questionnaire

Digitális kreativitásfejlesztés az angol nyelvoktatásban: a virtuális valóság hatása a tanulói kreativitásra, motivációra és íráskészségre

1. Kérlek add meg az egyedi azonsítód (a detektív neved):

2. Kérlek jelöld, hogy mennyire értesz egyet az alábbi állításokkal:

[illegible]

megismerése
és annak több
aspektusának
felfedezése
iránt.

A detektív
történet írását
izgalmasnak és
képzeletemet
serkentőnek
találtam.

Hasznosnak
találtam a
detektív
történet írását
az angol
írás készségem
és
kreativitásom
fejlesztésében.



Appendix 5. An example of the evaluated student stories

The day that changed my life

My name is detective Musty. I work at the Southwark police station on borough High Street as a detective. Today I am going to tell you about an experience of mine that happened about five years ago on exactly 2019.01.30.

On January the 30th 2019 I woke up in the middle of the night to my phone ringing. When I got the call I instantly woke up and wondered who the hell calls at this hour. When I picked up my phone, I noticed that it was sargeant Wade Grey, The sargeant at my police station. My heart was pounding in my chest because this had never happened to me before. I picked up my phone and Just as I was about to answer the call, my friend Jamie burst into my room and shouted „The Bank of Engald was robbed“ I could't believe what I had just heard. I instantly thought that the phone call from my boss was regaring this matter. By this time my phone had been ringing for about 10 seconds. I answered it and immediately heard my boss shouting on the phone to have me go in the station right away. Of course I got up as fast as possible and to get dressed and head to the police station.

When I stepped in, the chaos I saw was nothing like I had ever seen before. People were running up and down screaming and shouting about the horrrifying event that happened. I immediately got started on the case, and asked my friend Nick to get me up to speed. He told me That 3 armed men had broken into the Bank of London and took millions of pounds and that they were heading to Heathrow Airport to get the money out of the UK and try to get away with this. As one of the best detectives in the city I was not about to let this happen. From the police station I went to the crime scene, the Bank of London. When I arrived, they told me, they had already pulled fingerprints on the 3 men. Their names were Jack Soloff, Mark Webber and Derek Hunt. I instantly recognized their names. I had been chasing after these guys for what felt like an eternity, trying to catch them, but I felt like this time was different. I felt like this was the time I was going to catch them.

After I was done inspecting the scene I got a call from an unknown number. When I picked up I heard a man's voice and what sounded like my wife screaming. When the guy on the phone introduced himself as Jack Soloff I felt like I had seen a ghost. I almost passed out hearing his and my wife's voice on the same call. He told me, that they had kidnapped my wife and were going to kill her unless I let them get away with their crime and do everything in my power to stall the police, so that they can get out of the UK. I can't even explain the amount of emotions that I had felt at that moment. I was given a choice, the choice to betray my country, or to save the love of my wife. I was overwhelmed with emotions, but I knew I had to do whatever it takes to save her. I felt like I would betrayed my whole country by saving my wife, but I didn't care, I just wanted to get the chance to see her again. I did everything up until this moment that was asked of me, and then some, so I decided, this time I will choose me. I will selfishly choose myself and I won't care what anyone thinks.

I got back to the station and told them, that I had heard from a reputable source, that not only were they not heading to Heathrow Airport, they were heading to London Stansted Airport, which is on the complete opposite side of London. Since I was such a well known detective I knew I could trick them. They instantly redirected the team that was sent to Heathrow Airport to Stanstead Airport. I called Jack back and told them, that the airport is clear for them to escape. I got an address from them, and they told me, my wife is at this location. I ran to my car and drove as fast as I could. When I got there I saw my wife tied down and crying on the floor. I felt immediate relief when I saw her. I untied her and we escaped together. We went to the airport ourselves, to get away from the UK because I knew that after they found out I lied to them, they would have me arrested. We got on the first plane that took us outside the UK, and we have been living our life, together as a family.

- 1) Grammar: 4/5
- 2) Cohesion/Coherence: 3/3
- 3) Vocabulary: 5/5
- 4) Creativity: 6/7
- 5) Target vocabulary: $\frac{22}{301} \cdot 100 = 7,3\%$
- 6) Descriptive elements: 2,23%

- 7) Length: 834 words
- 8) Lexical density: 42,86%
- 9) Average sentence length: 18,47 word
- 10) Lexical variation: 56%
- 11) Adjectives: 1,8%
- 12) Adverbs: 4,68%

Note: Green markings were used to highlight the target vocabulary items, the descriptive elements were underlined with blue, and corrections were made in red.

Appendix 6. Student story webs in paper vs. in Google Earth

