

## **TREASURE OF HABITATS**

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### **SYNOPSIS**

'Treasure of Habitats' is a digital innovation, which is specially developed for Year 2 pupils to solve their vocabulary problems. A majority of pupils have vocabulary sizes falling below average which leads to difficulties in expressing their ideas and overall weak academic performance. (Rashidah & Faizah, 2014). In overcoming the problems, the digital innovation has incorporated various digital tools with the element of Virtual Reality (VR). It manages to increase the pupils' interest, provides a highly interactive learning platform and offers varied interesting activities.

### **OBJECTIVES**

- a. To introduce the vocabulary of habitats and animals.
- b. To evaluate the pupils' understanding and mastery of vocabulary.
- c. To provide an interactive learning platform for the pupils to learn vocabulary.

### **INNOVATION ASPECT**

One of the problems identified is lack of vocabulary among pupils in ESL (English as Second Language) classrooms. The pupils experience difficulty in speaking fluently and understanding a text due to their unfamiliarity with the English vocabulary. This causes the pupils to incorporate their local languages and dialects to describe and to express themselves. Lack of vocabulary leads to poor reading comprehension especially among those with very low proficiency because they have no understanding of the words they encounter in a certain text or passage.

Another common problem in the classroom is poor recall of vocabulary. Pupils will always need to develop the capacity of expanding their stored level of words. However, some pupils are quick to forget the English words even after learning them previously, possibly due to the potential stumbling block in their language learning. According to Kee & Ting (2019), the stumbling block can happen because of the complexity of the words and lack of motivation. The unconventional and forceful memorising of the vocabulary

might not work for certain pupils to actually acquire vocabulary. They might not be able to express their ideas properly and are not confident with their own capabilities. (Talib, Ahmad, & Sakarji, 2019).

The digital innovation that has been developed is an interactive platform for the pupils to learn about the vocabulary of habitats and all the related words surrounding it. It is meant to provide a fun learning experience for Year 2 pupils. The innovation focuses on introducing vocabulary to the pupils through interactive contents. The technology tools that are used to create the interactive learning project are CoSpaces, Smart Learning Suite and Puzzel Game. The innovation will provide a virtual reality (VR) learning experience for pupils. The strategy of using VR is effective to expand the range of words progressively and improve the ability to recall them.

The basic idea of 'Treasure of Habitats' is to engage the pupils in looking for hidden treasure in the four habitats using the main platform, which is CoSpaces. It keeps pupils engaged with every activity as their curiosity is being evoked. Each CoSpaces scene represents a different habitat. They are required to explore the scene to complete whatever task given to them in the scene. It is different from reading descriptions and looking at book illustrations where they will not be able to get hands-on practice. By including active participation and interactive adventure-like activity, it will overcome the problems as already mentioned. Pupils are able to express their idea properly and also enhance their confidence as well as motivation level.



Picture 1: Jungle Scene



Picture 2: Example of introduction page in 'Smart Learning Suite'.

## ADVANTAGES OF INNOVATION

Firstly, the features of the digital innovation are attractive and interesting. In order to enhance the visual presentation of the information, task-based activities with vibrant colours and suitable graphics are integrated in the application. The usage of the audio-visuals and hands on activity can improve pupils' vocabulary knowledge because they are able to remember the information acquired longer. The more often the words are come upon in the interesting game-based activities, the higher the chance the pupils can remember and learn it. (Rashidah & Faizah, 2014). The extra details on the music background such as the sound of the nature with its pronunciation audio is an effective addition to the innovation. There are also suitable and fun song included that fit the pupils' age and interest.



Picture 3: Ocean scene with colourful visual and word caption

Secondly, virtual reality (VR) allows pupils to interact with it instead of only watching it. The ability to imagine the habitats and new concepts in 3D through VR experience can benefit pupils who usually struggle to remain focused in a traditional classroom environment. Engaging and immersive personal experience are important for effective words retention. Consequently, it motivates pupils to learn vocabulary in a meaningful way. Besides, it reduces the cognitive load to process the information. VR allows the pupils to control their hand movement on their own. Through this digital innovation, the pupils can navigate the screen as if they are embarking on a journey to the four habitats, which are jungle, ocean, desert and polar region. The pupils are put into explorative mode to find the 'hidden' diamond, which is can trigger their curiosity and increase pupils' participation in the learning. The habitats such as desert and polar region may be not familiar for them, but VR enables them to experience those in their own classroom.



Picture 4: Polar Region Habitat

Another advantage is the incorporation of other various activities to make learning more meaningful and exciting. There are elements of fun learning and education combined into one. There are varied activities that can be used by different types of learners. The matching games, word game and quiz are designed according to the pupils' level and age with the goal of helping them to gain information that they learn and apply it outside the classroom. The pupils also benefit from the immediate feedback that takes place during game playing. They get fast results without having to wait hours or days for test grade or an assignment.



Picture 5: Word matching game

	Ariana	100%	1500	Accuracy	Score	Email to Parent
	Sariya	100%	1300	Accuracy	Score	Email to Parent
	Deyang	100%	1300	Accuracy	Score	Email to Parent
	Awang	100%	5000	Accuracy	Score	Email to Parent
	qhairulhika	100%	5000	Accuracy	Score	Email to Parent

Picture 6: Kahoot quiz

## SUCCESS OF INNOVATION

Before the pupils started using the main innovation, they did a vocabulary quiz on an online platform, Kahoot. The results indicated that the innovation is successful in helping the pupils learn and master more vocabulary. From the first quiz, most of the pupils got some answers wrong. Their results improved after being introduced to the vocabulary of habitats through the Virtual Reality (VR) content on CoSpaces. Another quiz, which was given at the end of the session through the Quizziz platform. All of the pupils managed to answer the questions correctly. The digital tools can provided the teacher with instant feedback to detect their mistakes in an entertaining way.

Based on the feedback from pupils and observation, the innovation is able to increase the pupils' attention span. The pupils are more focused and engaged with the learning without feeling forced to learn. The pupils enjoy it more when the lesson is highly interactive. For example, VR creates an entire digital environment, a 360-degree platform that feels real. In reality, it is impossible to explore to the real habitats due to the physical limitations. Nevertheless, the technology enables pupils to interact with what they see as

if they were really there. With lesson-appropriate content as included in the syllabus, the pupils can finally learn in a very entertaining and anxiety-free way. In addition, the pupils are more motivated to have new academic interests, such as more words from other habitats.

In terms of production cost, the costs of the development is based on features and complexity of the digital platform. The software used in this innovation project offers a free platform to build applications. Hence, there is no cost involved. In order to make this educational application to reach the marketplace which are the teachers and pupils, the marketing strategy used is social media. Using social media such as Instagram and Facebook is very cost-effective. It helps obtain more exposure to wider audience and enhance brand awareness without having to pay.

## REFERENCES

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