

**SEA TURTLE TRAILS: AN EDUCATIONAL APPLICATION TO TEACH SEA
TURTLE CONSERVATION AWARENESS**

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ABSTRACT

The sea turtle is one of the endangered animals in the animal kingdom that suffered from the result of human activities. This is due to the lack of awareness about the value and threats of sea turtle that remain in our society which caused the conservation effort organized to be less effective. The effectiveness of the efforts to teach sea turtle conservation awareness that has been made which utilized digital tools such as website and application has yet to be quantitatively measured. Therefore, a digital educational game has been devised to teach students aged 18 and above about the awareness of sea turtle conservation. Such application, named “Sea Turtle Trails”, teaches the students about sea turtles by simulating their environment in marine life such as their diet and the threats that they encounter whether it is natural predator or man-made threat. The students will play as a sea turtle and try to complete the objectives while trying to survive the dangers in the ocean. The design of this game has been decided by conducting an online survey on adults to investigate their perspective with digital educational game and game-based learning, and their opinions on each features effectiveness to be implemented in the game. The game will be developed using the waterfall model of SDLC methodology. The effectiveness of the game will be measured using pre-test and post-test that incorporates randomized control group grouping method. The data obtained will be statistically analyzed using paired t-test to test the mean difference between two pairs of data.

ABSTRAK

Penyu merupakan salah satu haiwan terancam dalam alam haiwan yang menderita akibat aktiviti manusia. Ini berikutan kurangnya kesedaran tentang nilai dan ancaman penyu yang masih kekal dalam masyarakat kita menyebabkan usaha pemuliharaan yang dianjurkan kurang berkesan. Keberkesanan usaha untuk mengajar kesedaran pemuliharaan penyu yang telah dibuat yang menggunakan alat digital seperti laman web dan aplikasi masih belum diukur secara kuantitatif. Oleh itu, permainan pendidikan digital telah dirangka untuk mengajar pelajar berumur 18 tahun ke atas tentang kesedaran pemuliharaan penyu. Aplikasi sebegini, yang dinamakan "Sea Turtle Trails", mengajar pelajar tentang penyu laut dengan mensimulasikan persekitaran mereka dalam hidupan marin seperti diet mereka dan ancaman yang mereka hadapi sama ada ia adalah pemangsa semulajadi atau ancaman buatan manusia. Para pelajar akan bermain sebagai penyu laut dan cuba menyelesaikan objektif sambil cuba bertahan dari bahaya di lautan. Reka bentuk permainan ini telah diputuskan dengan menjalankan tinjauan dalam talian ke atas orang dewasa untuk menyiasat perspektif mereka dengan permainan pendidikan digital dan pembelajaran berasaskan permainan, dan pendapat mereka tentang setiap keberkesanan ciri yang akan dilaksanakan dalam permainan. Permainan ini akan dibangunkan menggunakan model "waterfall model" metodologi SDLC. Keberkesanan permainan akan diukur menggunakan ujian pra dan ujian pasca yang menggabungkan kaedah pengelompokan kumpulan kawalan rawak. Data yang diperolehi akan dianalisis secara statistik menggunakan "paired-t test" untuk menguji perbezaan min antara dua pasangan data.

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