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GALACTIC EXPLORER FOR LEARNING EDUCATION: GALEXIO SPACE GAME

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ABSTRACT

Educational games for children have been widely used in supporting learning in-side and out of school and a growing interest have appeared for the potential to deliver effective and engaging learning experiences. Educational games are important elements to maintain children interest motivation and immersion. There is variety of educational board games and that intend to assist users to achieve various educational goals. However, the present popular board games such as Monopoly, Uno and Sahiba are fun rather than learning centered. In order to overcome this problem, an innovative board game namely Galexio Space Game is designed to cater both fun and learning. The game set consists of dice, nine planets, solar systems set of questions, buying-trading stars and it needs at least two players. This educative game would inculcate interest in astronomy among children and has a potential to be patented and commercialized.

Keywords: astronomy, board game, adventure, learning, galaxy

1. INTRODUCTION

Visual elements that used in lessons are necessary in learning process [1, 2]. Games are one of the visuals elements can be used in learning activities which are effective for getting feedback immediately [3, 4]. There is a variety of games and that intend to assist users to achieve various educational goals. However, most game that available in Malaysia not focusing in astronomy field. Despite much effort, the educational board games for astronomy still on going to get the optimum knowledge and attractive games. Therefore, to overcome this problem, an innovation development which is Galexio Space Games is designed. This board game is a fun way to learn and practice facts about the planets in our solar system. In this board game, students are identifying the 9 planets of the solar system and the sun and intended to increase knowledge about solar system with this game. Children will enjoy reviewing all of the facts by answering the question cards about topics such as characteristics of each planet, facts about the Sun and the movement of the stars and constellations. Furthermore, learning about the solar system can allow everyone, especially the children to gain a greater appreciation for the frailness of solar system.

2. MATERIAL AND METHOD

This game board is designed to be easy to play and learn at anywhere. The board game made from acrylic. It is designed to be used friendly by children.



(a) Board games



(b) Nine Planets



(c) Dice



(d) Solar Systems Set of Questions



(e) Buying-trading Stars

Figure 1. Galexio Space Set

Table 1. How to play Galexio Space Game

<ul style="list-style-type: none"> ● In the beginning of the game, each player will be provided with 10 - point value of star.
<ul style="list-style-type: none"> ● Before completing the first round, players are not allowed to make any purchase.
<ul style="list-style-type: none"> ● Each right question will be rewarded with a blue star, if the players got a wrong answer, the star keeper will take a blue star from the player.
<ul style="list-style-type: none"> ● The stars are convertible as long as its value are the same. In order to be the champion, the player must have a set of of the Solar system, containing Sun, and the other eight planets.
<ul style="list-style-type: none"> ● If the players step on the Supernova and UFO, a blue star will be deducted. If the players step on the Black hole, 2 blue star will be deducted. If the players step on the Eclipse, 2 blue star will be given. If the players step on the Alien, they will be brought to the jail.

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