

The 3Rs Concept as an Added Value for Improving Students' Green Awareness through TVET Green Education in Malaysia

Sarsvathy Thirupathy
Ramlee Mustapha
Universiti Pendidikan Sultan Idris
Email: sarsvathy@edidik.edu.my

Abstract

On a global scale, we are facing four major environmental crises-environmental degradation, depletion of natural resources, waste management, and climate change. These crises are interrelated and connected to waste generation and waste management. Hence, waste generation and management is a global issue requiring special attention. Without green friendly solution, the world is facing a menacing future. Part of the feasible solution is to inculcate green values in the young generation through green TVET education. The 3Rs concept (Reuse, Reduce and Recycle) can be used to improve students' green awareness, knowledge, and skills. In fact, the 3Rs is a sustainable approach to waste management that can assist in reducing pollution and greenhouse gas emissions. Green composting is a good practice by recycling organic waste to produce compost and biogas. It is an alternative option to open dumping, a major greenhouse gas emission source. This conceptual paper aims to investigate using the 3Rs concept as an added value for improving students' green awareness through TVET green education in Malaysia. In the Malaysian junior high school curriculum, the elements of the 3Rs concept are taught in the Design and Technology (D&T) subject. However, evaluating its effectiveness in reducing environmental degradation is seldom being carried out. Thus, it is critical to investigate the effect of the 3Rs concept in enhancing green awareness among junior high school students in Malaysia.

Keywords: 3R concept, Green Awareness, Design and Technology (D&T), Environmental



ABSTRACT

On a global scale, we currently are facing four major environmental crises— environmental degradation, depletion of natural resources, waste management and climate change. These crises are interrelated and connected to waste generation and waste management. Hence, waste generation and its management is a global issue that requires special attention. Without green friendly solution, the world is facing menacing future.

1.0 OBJECTIVES

- The objective of this paper is to investigate the use of 3Rs concept as an added value for improving students' green awareness through TVET green education in Malaysia.
- In Malaysian junior high school curriculum, the elements of 3Rs concept are taught in Design and Technology (D&T) subject.

2.0 ADVANTAGES

The 3Rs concept (Reuse, Reduce and Recycle) can be used for improving students' green awareness, knowledge and skills.

In fact, 3Rs is a sustainable approach to waste management that can assist to reduce pollution and greenhouse gas emission.

Green composting is a good practice by recycling of organic waste to produce compost and biogas. It is an alternative option to open dumping which is a major source of greenhouse gas emission.

3.0 USEFULNESS

- It is useful for recovering our global issues. There are facing four major environmental crises such as environmental degradation, depletion of natural resources, waste management and climate change.
 - These crises are interrelated and connected to waste generation and waste management. Hence, waste generation and its management is a global issue that requires special attention. Without green friendly solution, the world is facing menacing future.

4.0 NOVELTY

Waste minimization can be achieved in an way by focusing primarily on the first of the 3Rs,

"reduce," followed by "reuse" and then "recycle".

5.0 COMMERCIALISATION POTENTIAL

The move to a circular economy—a system that aims to reduce, reuse and recycle materials—could address 70% of global greenhouse emissions

6.0 INVENTORS

Sarsvathy Thirupathy
Prof Dr Ramlee bin Mustapha

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Prof. Madya Dr. Nur Hisham Ibrahim
Rektor
Universiti Teknologi MARA
Cawangan Perak



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PROF. MADYA DR. NUR HISHAM IBRAHIM
REKTOR
UNIVERSITI TEKNOLOGI MARA
CAWANGAN PERAK
KAMPUS SERI ISKANDAR