

Learning Sustainable Development Goals through Gamification and Role-Playing

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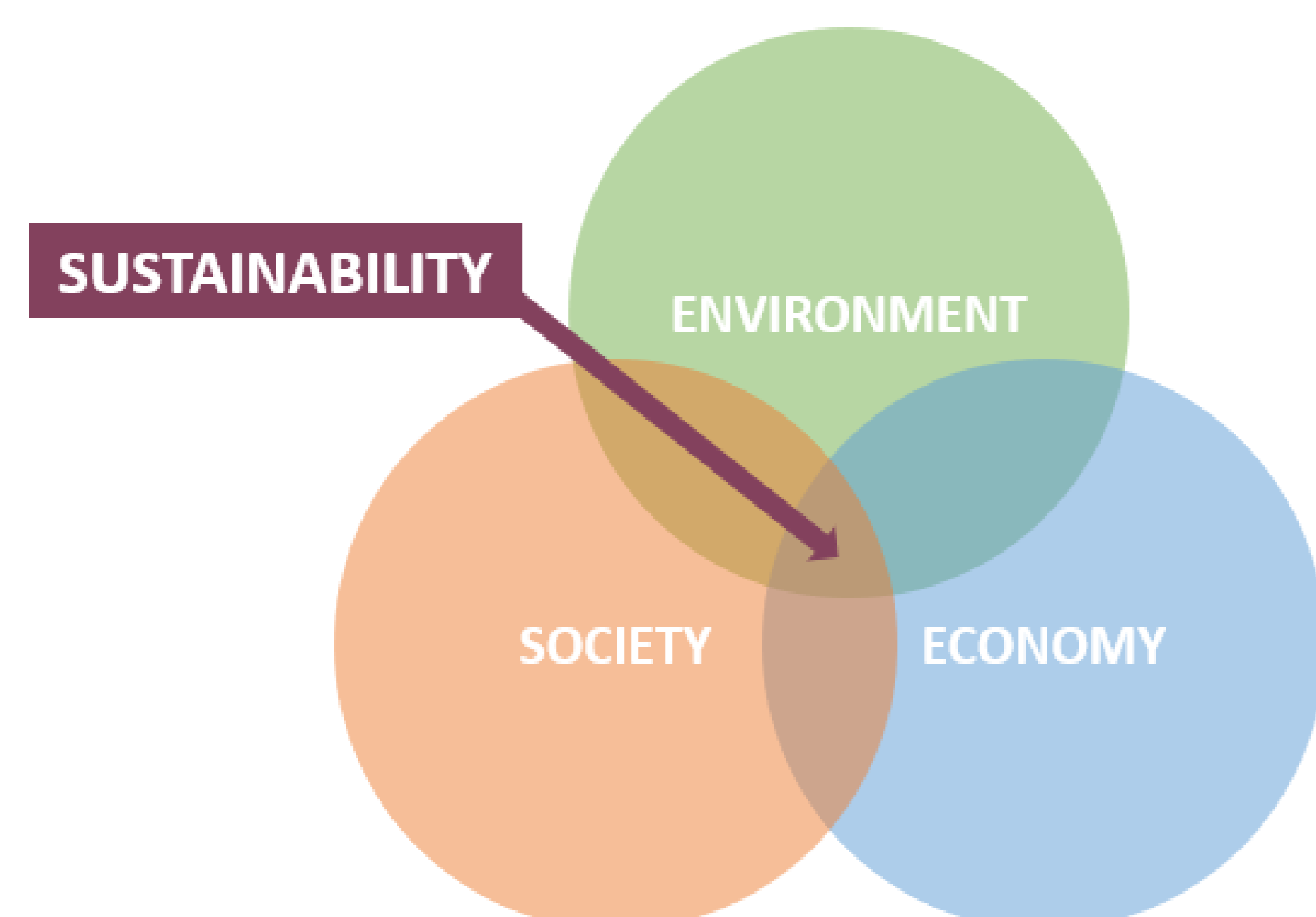
Abstract

Since the creation of the Agenda 2030, which introduced the 17 Sustainable Development Goals (SDGs), **sustainable development** has been integrated into different fields of society, including **education**. Through the incorporation of this concept in the educational field, individuals learn the **importance of taking actions** in consideration of the **ability** of present and future generations to **meet their needs**. Current study introduces **gamification** and **role-playing** games as a pedagogical innovation to ensure an entertaining learning experience and a long-lasting knowledge acquisition. The results, which have been evaluated using a survey, suggest that the **level of learning improved** due to gamification and role-playing.

Project description

This study analyzes the **impact** of innovative educational approaches such as **gamification** and **role-playing** on **student satisfaction** and **learning outcomes**.

- A more sustainable tomorrow can be achieved through **education for sustainable development (ESD)** as individuals learn to creatively generate innovative solutions that diverge from traditional business practices by introducing the three dimensions of sustainability into decision-making.
- **Higher education institutions** provide students with a specific set of tools that will enable them to identify and exploit sustainable opportunities as future actors in the business world.



Materials and methods

- The introduction of **gamification** and **role-playing** as teaching methods can promote the attainment of **new skills and competencies** while offering students a **new form of entertaining learning** which is capable of generating **long-lasting knowledge acquisition**.
- **Active learning methodologies** place the student as the cornerstone of knowledge acquisition and try to encourage the development of soft skills.
- The activity was evaluated with a **survey** with Likert, rating and open-ended questions.

Table 1. Positive effects of gamification and role-playing on students' attitudes and perceptions.

Positive effects	
Motivation	Participation
Amusing and pleasant experiences	Game thinking
Adoption of different roles	Generation of meaningful learning
Collaboration	Increasing attention
Active behavior	

Results

After conducting and analyzing the survey, the results indicate that **students' learning level improved** during the SDGs training session by using non-traditional teaching methodologies. The main findings suggest that the introduction of gamification and role-playing **positively affects the educational process**. Additionally, students claimed that they adopted a **more participative and cooperative** attitude due to the innovative learning approach.

Gamification and Role-Playing

Educational process

Positive effects:
more cooperation and participation

Conclusions

Main conclusions point to a **high level of students' satisfaction** with the **methodology** employed as they considered it widely **appropriate and adequate** to learn about the SDGs. Although this study is limited by the small number of students who participated in the teaching innovation, the use of gamification and role-playing is recommended when training professionals in strategic decision-making.