

Learning Sustainable Development Goals through Gamification and Role-Playing

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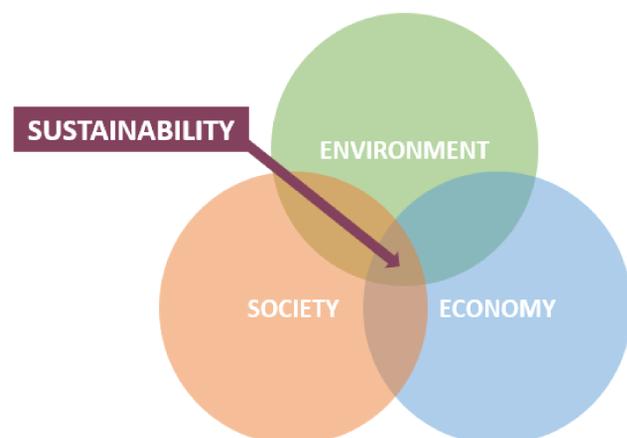
Abstract

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.