Canadian Space Agency

GAMIFIED E-LEARNING

E-LEARNING CASE STUDY

PUG INTERACTIVE

The **Canadian Space Agency (CSA)** is a federal government agency responsible for coordinating and managing Canada's space program. As part of their mission to inspire and educate Canadians about space exploration, CSA sought to develop an innovative and engaging e-learning application that would educate students and the public about space science, technology, and exploration.

BACKGROUND

CSA faced the challenge of finding a way to effectively engage learners and make space science and technology concepts interesting and accessible to a wide audience. Traditional e-learning methods were not yielding desired results, as they lacked the desired level of engagement and interactivity. CSA wanted to find a solution that would leverage gamification elements to create an engaging and motivating learning experience that would spark curiosity and interest in space science and technology.

OBJECTIVES

- Engage learners and make space science fun and interesting
- Spark curiosity, interest and retention in space science and technology content
- Build agency recognition amongst the target audience
- Identify/capture patterns of engagement metrics that uncover user trends, behaviors, preferences, and social interactions

ACHIEVEMENTS

Increased Engagement: Learners were motivated to explore and learn about space science and technology concepts in a fun and interactive way. The gamification elements such as quizzes, challenges, and virtual rewards kept learners engaged and motivated to progress through the modules.

Improved Learning Outcomes: The personalization features of the Picnic platform allowed learners to learn at their own pace and style, resulting in improved learning outcomes. Learners were able to track their progress, receive feedback, and focus on areas where they needed improvement, leading to a better understanding of space science and technology concepts.

Enhanced Motivation and Retention: The competition and collaboration features of the Picnic platform fostered a sense of excitement, challenge, and social engagement among learners, resulting in increased motivation and retention. Learners were more likely to complete the learning modules, earn points, badges, and rewards, and share their achievements with others, creating a sense of accomplishment and pride in their learning achievements.

Positive User Feedback: The gamified e-learning application developed by CSA and PUG Interactive received tremendous positive feedback from users. Learners found the interactive and gamified approach engaging, enjoyable, and motivating. Many learners expressed that the gamification elements made complex space science and technology concepts more accessible and interesting, and they appreciated the personalization features that allowed them to learn at their own pace and style. Users also noted that the competition and collaboration features added a fun and social aspect to the learning experience, making it more enjoyable and memorable.

KEY RESULTS

29.3 Learning Engagement Actions Per User

2.2x Monthly Activity Increase

- ✓ Increased engagement
- ✓ Improved learning outcomes
- ✓ Enhanced motivation and retention
- ✓ Positive user feedback