Red Flag Mania Research Report
Impact of RFM on Student Engagement and Ethics Positioning
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Executive Summary

WGU Labs partnered with Red Flag Mania (“RFM”) to assess users’ engagement with RFM’s novel, game-based learning activity. This report summarizes the findings from a descriptive study that assessed how completion of the RFM Season 1 activity impacted student engagement and ethics positioning.

The study involved administration of an online Qualtrics survey to 184 graduate-level students from five universities in the United States between September 2020 and December 2020. All students completed an activity from Season 1 of RFM, which challenged students to identify the culprit of an accounting and tax fraud scheme by examining a variety of multimedia components, such as video testimonials and bank documents. Prior to and after completing their RFM activity, students responded to surveys measuring user’s ethics positioning (e.g., Forsyth, 1980), and engagement with the RFM product (Fu, Su, & Yu, 2008; Weibe, Lamb, Hardy, & Sharek, 2014).

RESULTS AT A GLANCE

90% of students report that completing the RFM investigation was a worthwhile activity.

85% of students would choose the RFM activity over a more traditional class activity.

76% of students would recommend the RFM activity to their friends.
Results indicated that:

Completion of the RFM activity was related to increases in scores on relativism and idealism dimensions of ethical positions.

Students’ ethical positions, specifically along relativism and idealism dimensions, increased after completing the RFM activity. Though the effect sizes were relatively modest ($g_{\text{Relativism Pre-Post}} = 0.14, g_{\text{Idealism Pre-Post}} = 0.28$), the data show that students reported increases in both relativism and idealism dimensions after activity completion. This suggests that the ethical themes underlying the fraud case had enough of an impact on students such that their own ethical positions were positively affected after engaging with the case.

A majority of students would choose to complete RFM again if given the option.

Roughly 85% ($n = 156$) of students reported that if given the option, they would choose to complete the RFM activity over a more traditional class activity (Fig. 1).

This highlights students’ preference for the engaging, game-based learning environment created by RFM over the conventional lecture, case-based activity found in the accounting classroom. As noted by one student:

“This was very worthwhile. I loved every single second of this activity. I would 100% do this again if I was given the opportunity. Best in-class activity I have ever had.”

Figure 1. Student responses for whether they would choose to use RFM again given the option of RFM and a more traditional class activity.
Students reported high immersion and interest/curiosity in the RFM activity, with 90% of students (n = 165) reporting that completing the RFM investigation was a worthwhile activity. In support of this finding, 87% (n = 157) of students reported feeling involved with RFM, with 57% (n = 104) of them saying they felt “emotionally involved” with the game, highlighting how RFM employs digital storytelling principles of integrating voice and emotional content into the lesson to fully engage the learner. RFM learners also become immersed by interacting with the variety of multimedia learning components (e.g., videos, character testimonials, interactive documents) incorporated throughout the fraud case, as evidenced by one student commenting:

“In support of this finding, 87% (n = 157) of students reported feeling involved with RFM, with 57% (n = 104) of them saying they felt “emotionally involved” with the game, highlighting how RFM employs digital storytelling principles of integrating voice and emotional content into the lesson to fully engage the learner. RFM learners also become immersed by interacting with the variety of multimedia learning components (e.g., videos, character testimonials, interactive documents) incorporated throughout the fraud case, as evidenced by one student commenting:

“Excellent format, thorough, and captivating. The evidence provided was relevant, and the characters were very realistic.”

Overall, 90% (n = 165) of students reported that their experience with RFM was worthwhile, with 76% (n = 139) even saying that they would recommend the RFM activity to their friends and family. As seen with these results, RFM’s novel integration of a case-based accounting lesson with principles of multimedia learning provides both a fun yet compelling learning environment.

Through combining together theories of digital storytelling, and case-based and problem-based learning, RFM has created an engaging environment for students to master principles of detecting fraud. Findings from this study show promising evidence that RFM impacts students in a variety of dimensions, from immersing them in the gamified learning activity to increasing their knowledge content around concepts of tax and accounting fraud. The Season 1 case also seems to teach a more implicit lesson on accounting ethics, as evidenced by the early findings on changes in ethics positions. Overall, these results highlight the compelling nature of RFM’s novel and innovative learning platform. Future research will continue to uncover the impact of RFM and how it affects learning outcomes more generally as RFM continues to expand in use.
WGU Labs is a nonprofit affiliate of WGU. WGU Labs primarily provides research, offers services, invents, builds, and secondarily invests in strategically aligned innovative learning solutions that improve quality and advance educational outcomes for learners everywhere. Building on social psychology, learning science, and industry trends, WGU Labs accelerates education startups and develops its own research-supported, scalable products.

Red Flag Mania (RFM) is an innovative e-learning solution that combines film, theory, and “whodunit” fun to empower learners to use data to solve complex problems. This game-based investigative experience uses “ripped-from-the-headlines stories” to engage students. RFM is currently used in higher education and postsecondary learning environments.