

Bonus Buddy: Gamifying Workplace Productivity

Kenneth Lao

Department of Computer Science, Virginia Tech
Blacksburg, VA, USA
kennethlao120@vt.edu

Albert Essiaw

Department of Electrical Engineering, Virginia Tech
Blacksburg, VA, USA
alberte@vt.edu

Zachary Beritt

Department of Computer Science, Virginia Tech
Blacksburg, VA, USA
zberitt@vt.edu

Qitao Yang

Department of Computer Science, Virginia Tech
Blacksburg, VA, USA
yqitao@vt.edu

Abstract

Workplace productivity systems often rely on end-of-quarter or end-of-year rewards such as bonuses or promotions. This system can feel distant and may not provide enough immediate motivation for employees. **Bonus Buddy** aims to gamify workplace productivity by offering incremental, real-time rewards based on task completion. By creating a system where employees earn rewards based on difficulty, completion speed, and other performance metrics, our app motivates productivity and provides constant feedback. The proposed system could boost engagement, incentivize high performance, and align employees with company goals more effectively.

Keywords

gamification, productivity, workflow management, software engineering

1 Introduction

Today, maintaining high levels of employee motivation is a significant challenge. Traditional reward systems often rely on delayed incentives, such as annual bonuses or promotions, which may not provide sufficient immediate motivation for employees. According to a survey by Gallup [2], only 15% of employees worldwide are engaged in their jobs, highlighting a global engagement crisis. The lack of employee engagement can quickly lead to decreased productivity, higher turnover rates, and ultimately affect a company's bottom line.

While delayed rewards are valuable, they can feel distant, leaving employees without real-time motivation to remain engaged in their daily tasks. This delay in rewards leads to productivity gaps and inefficiencies that could otherwise be mitigated by a more frequent feedback loop. Immediate recognition has been shown to boost employee morale and productivity [7], suggesting a need for systems that provide more immediate incentives.

Bonus Buddy addresses this challenge by introducing gamification principles into the workplace, offering employees incremental rewards for task completion. Our product offers a way for users to have smaller, meaningful rewards each time they complete a task, such as finishing a project or resolving a customer ticket, instead of waiting until the end of the year for a performance review. Tasks are presented in the form of *bounties*, which vary in difficulty and correspond to different reward tiers. Employees are rewarded for both the quantity and quality of their work, providing them with constant feedback and motivation to perform at their best.

By implementing a continuous feedback mechanism, **Bonus Buddy** provides transparency on employee performance and helps companies maintain higher engagement levels. Employees can track their progress in real-time and compete for rewards, fostering healthy competition among peers. This system is designed to reduce procrastination, increase productivity, and ultimately help employees feel more aligned with their organization's goals.

2 Related Work

The application of gamification techniques in non-gaming contexts has shown promising results in enhancing engagement and productivity. This system leverages game-like mechanics, such as points, leaderboards, and rewards, to motivate users to engage with systems more actively.

One study by Hamari et al. [3] demonstrated that applying gamification in workplace settings led to a marked increase in employee output. By introducing real-time rewards for completing tasks, employees were more engaged, motivated, and satisfied with their work. Additionally, leaderboards incentivized friendly competition, further driving productivity.

Existing tools like *Asana* and *Trello* have incorporated basic gamification elements, such as task completion badges and progress bars, to motivate users [?]. However, these features are often limited and do not fully capitalize on gamification's potential to enhance productivity. **Bonus Buddy** aims to fill this gap by offering a more comprehensive gamified experience tailored to workplace productivity.

Research on physical activity and gamification has also shown notable success in increasing user engagement. For example, the study by Alahäivälä and Oinas-Kukkonen [1] examined large-scale mobile applications that utilized gamified challenges to promote walking. The findings revealed that gamified elements such as challenges and rewards led to a significant increase in activity levels. Although focused on physical health, the principles of motivation and reward can be applied to workplace productivity.

Furthermore, Johnson et al. [4] confirmed the positive effects of gamification on behavior modification. This research highlights the importance of immediate feedback and incremental rewards in promoting long-term engagement—key principles that **Bonus Buddy** will leverage in its implementation to enhance workplace productivity.

Despite the positive outcomes, some studies have noted potential drawbacks, such as the novelty effect wearing off over time [5]. Therefore, it is essential to design a system that evolves with

user engagement levels, incorporating new challenges and reward mechanisms to sustain interest. Additionally, Mekler et al. [6] found that while gamification can enhance quantitative performance, it may not necessarily improve the quality of work, emphasizing the need for a balanced approach.

3 Software Engineering Process

For the development of **Bonus Buddy**, we have chosen to adopt the *Agile Software Development* process. Agile was discussed extensively in class and is well-suited for this project because of its iterative nature, allowing us to continuously gather feedback from both stakeholders and potential users. This ensures that the final product aligns with both user expectations and business requirements.

The key advantage of using Agile is the flexibility it offers in responding to changes. As **Bonus Buddy**'s primary function is to improve workplace productivity, user feedback will be critical in refining features such as the reward system, leaderboard structure, and task difficulty scaling. Agile's frequent sprints and reviews will allow us to rapidly prototype these elements, test them in real-world scenarios, and make adjustments as needed.

Compared to traditional methodologies like Waterfall, Agile allows for overlapping phases and continuous integration of new requirements. This is crucial for a project like ours, where user engagement and satisfaction are paramount. The ability to adapt to changing requirements and incorporate user feedback makes Agile the optimal choice.

Our first goal in the agile cycle is to create a *minimum viable product* (MVP) that includes core functionality, such as task tracking, reward distribution, and user rankings. Afterwards, each sprint, typically lasting two weeks, will aim to incrementally improve the user experience by adding more complex features like personalized incentives, performance analytics, and customizable dashboards. We will employ user stories and personas to ensure that development stays user-centered.

Moreover, Agile's emphasis on communication and collaboration fits well with our team structure, where members from different departments can contribute to various phases of the project. We will use tools such as Jira for task management, Slack for communication, and GitHub for version control to ensure that everyone stays on the same page and can collaborate efficiently.

To ensure quality, we will integrate continuous integration and continuous deployment (CI/CD) practices. Automated testing, code reviews, and sprint retrospectives will be integral parts of our development process, helping us identify and fix issues early.

4 Challenges and Considerations

Several technical and design challenges are anticipated during the development of **Bonus Buddy**. First, we must ensure that the reward system is balanced to incentivize productivity without leading to burnout. The rewards need to be significant enough to motivate employees but not so frequent that they lose meaning over time. Designing a dynamic reward algorithm that adjusts based on employee engagement levels and company metrics will be crucial.

Privacy concerns regarding employee performance tracking are also significant. The system must be transparent about how data is

collected and used, ensuring employees are comfortable with being monitored. We plan to implement data anonymization techniques for any leaderboard systems and allow employees to opt out of public rankings if they wish to keep their performance private.

Another important consideration is scalability. **Bonus Buddy** must be able to handle a wide variety of workplaces, from small startups to large enterprises with thousands of employees. Therefore, integrating **Bonus Buddy** with existing workplace tools and platforms (e.g., Slack, Microsoft Teams, Jira) is essential for seamless adoption. Ensuring compatibility and ease of integration will reduce friction and encourage usage.

User engagement over the long term is another challenge. To prevent the novelty of the gamification elements from wearing off, we plan to incorporate adaptive game mechanics that evolve over time, such as seasonal challenges, team-based competitions, and customizable avatars. Regular updates and new features will keep the platform fresh and engaging.

5 Conclusion

Bonus Buddy represents a new approach to workplace productivity, utilizing gamification to provide real-time feedback and rewards to employees. By motivating employees through smaller, incremental rewards, we aim to bridge the gap between day-to-day tasks and long-term goals, creating a more engaging and productive work environment.

Through the Agile development process, we will build and refine the system iteratively, ensuring that the final product meets user needs while maintaining flexibility for future improvements. With real-time rewards, transparency, and continuous feedback, **Bonus Buddy** has the potential to revolutionize the way companies think about productivity.

References

- [1] Timo Alahäivälä and Harri Oinas-Kukkonen. 2016. Understanding persuasion contexts in health gamification: A systematic analysis of gamified health behavior change support systems literature. *International Journal of Medical Informatics* 96 (2016), 62–70.
- [2] Gallup. 2017. State of the Global Workplace. <https://www.gallup.com/workplace/257552/state-global-workplace-2017.aspx> Accessed: 2023-09-25.
- [3] Juho Hamari, Jonna Koivisto, and Harri Sarsa. 2014. Does gamification work? – A literature review of empirical studies on gamification. In *Proceedings of the 47th Hawaii International Conference on System Sciences*. IEEE, 3025–3034.
- [4] Daniel Johnson, Sebastian Deterding, K Ashley Kuhn, Angelina Staneva, Leanne Hides, and Lenka vSt'astn'a. 2016. Gamification for health and wellbeing: A systematic review of the literature. *Internet Interventions* 6 (2016), 89–106.
- [5] Jonna Koivisto and Juho Hamari. 2019. The Rise and Fall of Gamification? Gamification Concepts, Uses, and Applications. *International Journal of Technology Marketing* 14, 2 (2019), 151–182.
- [6] Elisa D Mekler, Florian Brühlmann, Alexandre N Tuch, and Klaus Opwis. 2017. Do points, levels and leaderboards harm intrinsic motivation? An empirical analysis of common gamification elements. *Computers in Human Behavior* 71 (2017), 525–534.
- [7] Harvard Business Review Analytic Services. 2019. The Impact of Employee Recognition on Employee Engagement. *Harvard Business Review* (2019). <https://hbr.org/sponsored/2019/05/the-impact-of-employee-recognition-on-employee-engagement> Accessed: 2023-09-25.