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INNOVATION IN ACTION: TURNING IDEAS INTO REALITY



Chapter 35

Work Buddy – A Virtual Co-Working Experience

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ABSTRACT

The innovative project "Work Buddy-A Virtual Co-Working Experience" introduces a productivity tool designed to address the growing challenges of maintaining motivation, productivity, and focus while working alone in a remote setting. In an independent work environment, many individuals struggle with reduced motivation, procrastination, and feelings of isolation. To address these issues, this project, Work Buddy, offers a digital solution by simulating a real-time co-working environment through an immersive Pomodoro-based pre-recorded video session. The video features 25-minute work intervals followed by 5-minute scheduled breaks. It aims to immerse the user in an experience similar to engaging with a live co-working environment, providing a virtual sense of presence and companionship. The video incorporates culturally relevant Malaysian background music and includes a timer to encourage focused work for a set duration without distractions. This tool is designed for those who engage in independent or remote work settings, including educators and students, aiming to foster intentional productivity by transforming passive video consumption into an active, shared working experience. Preliminary implementation of this virtual co-working productivity tool suggests positive user engagement and perceived improvements in productivity and motivation. This innovation has taken steps for copyright protection through MyIPO and has been submitted for publication in an academic journal. Work Buddy demonstrates strong potential for scalability, commercialisation, and environmental sustainability through its fully digital delivery format. This project not only introduces a novel approach to virtual coworking but also hopes to contribute to the growing body of literature on digital productivity tools and remote work environments.

Key Words: Virtual Co-Working, Productivity Tool, Remote Working, Pomodoro Technique

1. INTRODUCTION

Remote working and online learning have fundamentally transformed how individuals engage with their tasks. It is undeniable that working independently offers flexibility and autonomy. However, this environment has also created a set of challenges, particularly in terms of

productivity, reduced motivation, procrastination and feelings of isolation. Many remote workers and students may experience struggles in maintaining good levels of motivation and productivity while working independently. These issues, if left unaddressed, will hamper good performance, high engagement and strong motivation. In response to these issues, the innovation project, Work Buddy – A Co-Working Experience, was developed and introduced as a digital productivity tool designed to stimulate co-working environments and provide a sense of companionship. It aims to introduce a structured and humanised approach to visual co-working through a one-hour immersive video-based session by integrating proven time management strategies, the Pomodoro technique. Through this virtual companion experience, this innovation offers users a sense of presence and accountability while working alone.

2. LITERATURE REVIEW

Humans are inherently social beings; handling tasks alone may significantly affect their well-being, mental state and emotions. According to Yang & Swekwi (2012), unusual circumstances of isolation may expose mental health to a vulnerable state, which further leads to regressive development in emotional behaviour among students.

In the meantime, digital tools such as "Study with Me" (SWM) videos have gained recognition for their ability to offer virtual companionship and other various benefits, including shaping learners' motivation (Bahja et al., 2021; Ren et al., 2025). SWM videos enable users to experience the feelings of studying together in a shared virtual environment, even in isolation. According to Ibtasar et al. (2022) and Jin (2022), SWM also allows users to experience virtual companionship with less pressure. However, many existing SWM videos lack cultural relevance and structure thus limiting their effectiveness in different contexts.

In parallel, the Pomodoro Technique, introduced by Francesco Cirillo in the early 1900s, is considered a simple yet extremely powerful tool in time management strategies (Burton, 2016). Typically, a Pomodoro session involves the integration of 25-minute work intervals followed by a 5-minute short break. Several studies suggest that integrating SWM videos aids in maintaining focus (Szupunar et al., 2013; Zahariades, 2015).

3. METHODOLOGY

The development of Work Buddy – A Co-Working Experience followed a three-phase innovation stage: i) The Preliminary Implementation Stage, ii) The Production Stage and iii) The Publicising Stage.

3.1 Stage 1: The Preliminary Implementation Stage

In the initial stage, a perception-based study was conducted among a group of diploma students in UiTM Cawangan Negeri Sembilan Kampus Rembau to investigate the role of virtual co-study videos or the Study with Me (SWM) videos in university student learning and their overall impact on learning motivation. The study employed a quantitative descriptive research design using a questionnaire as the instrument. The results indicated that these videos positively impact students on their learning motivation.

3.2 Stage 2: The Production Stage

Building on the promising results of the preliminary implementation, the second stage involved the production of the Work Buddy – A Co-Working Experience video. This one-hour video was personally recorded in a realistic work setting. It is intentionally designed to replicate the environment of a live co-working space. The video incorporates the Pomodoro Technique, featuring 25-minute work intervals followed by 5-minute breaks. To enhance the immersive experience, the video includes a visible timer that allows users to feel encouraged and focused while working or studying for a set duration. Malaysian background music is also incorporated in the video to reflect local identity.



Figure 11: The Production of Work Buddy Video

3.3 Stage 3: The Publicising Stage

Upon completion, the Work Buddy – A Co-Working Experience was made available to the public through an open-source platform, YouTube, with copyright protection obtained via MyIPO (Intellectual Property Corporation of Malaysia). The selection of open source is to encourage the widespread use and accessibility of the videos. Users can now freely access the video and begin a synchronised and focused working or studying session wherever they are.



Figure 12: The Publicising Stage of Work Buddy video

4. FINDINGS AND DISCUSSION

The initial observation on the SWM videos, the digital productivity tool, yielded a positive reception among respondents. It is reported that the tools managed to provide a boost in students' learning motivation based on the overall means as presented in Table 1.

Table 1: The Impacts of the SWM Videos on Students' Learning Motivation

	Items	Mean
1.	The SWM videos helped me develop a consistent study routine.	3.79
2.	The SWM videos helped reduce procrastination during my study sessions.	3.98
3.	I feel more productive after studying with the SWM videos.	4.06
4.	SWM videos have influenced my academic performance positively.	3.83
5.	I would recommend SWM videos to others as a study aid.	4.24
6.	I complete tasks more efficiently during study sessions with these videos.	3.94
7.	My time management has improved when studying with SWM videos.	3.85
8.	I perform better on exams or assignments after using the SWM videos.	3.87
9.	I can study for longer periods when using SWM videos.	3.85
Overall		3.93

Based on the positive findings, the current innovation is designed and aimed at targeting diverse groups, including remote workers, educators and even students. One of the key strengths of Work Buddy – A Co-Working Experience is its unique features. The integration of the Pomodoro Technique as a time management strategy within the one-hour video sessions allows for a structured format when dealing with any tasks. Plus, the accompaniment of Malaysian background music and a timer further differentiates Work Buddy – A Co-Working Experience from the generic SWM videos. This innovation also maintains its originality by providing an immersive experience of a real-time co-working environment.

5. CONCLUSION AND RECOMMENDATION

Work Buddy - A Co-Working Experience represents an innovative response to the widespread challenges faced by individuals who engage in remote work or study. By integrating the real-time co-working environment, proven time management strategies, the Pomodoro Technique, and cultural identity, the innovation not only aids in enhancing productivity but also benefits users' emotional and psychological needs. Work Buddy – A Co-Working Experience is more than just a video. It offers users a virtual working companion that extends further to high productivity, strong motivation and a sense of presence while dealing with an isolated environment. This innovation also demonstrates its high scalability, which effectively serves a diverse group of individuals who engage in work or study within isolated environments. As a fully digital productivity tool which uses an open platform, Work Buddy -A Co-Working Experience establishes strong sustainability and accessibility that ensures immediate dissemination across various digital platforms. It is recommended that subsequent research and projects explore personalisation options more, such as adjustable work-to-break ratios or maybe the inclusion of motivational messages and their impact on different user demographics. Ultimately, Work Buddy - A Co-Working Experience serves as an impactful digital productivity tool that significantly enhances our work outcomes when dealing in isolated environments.

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REFERENCES

- Bahja, M., Kuhail, M. A., & Hammad, R. (2021). Embracing technological change in higher education. *Higher Education-New Approaches to Accreditation, Digitalization, and Globalization in the Age of Covid.*
- Burton, L. D. (2016). Can a tomato increase your productivity? *Journal of Research on Christian Education*, 25(2), 95-96.
- Ibtasar, R., Heineke, C. M., & Michaelis, J. E. (2022). "With You I'll be able to actually learn everything": Exploring learner experiences with a "Study with Me" video. In *Proceedings of the 16th International Conference of the Learning Sciences-ICLS 2022, pp. 203-210.* International Society of the Learning Sciences.
- Jin, L. (2022). Virtual study room on social media "Study with Me" videos on Bilibili among Chinese university students.
- Ren, N., Reynolds, B. L., & Rusk, B. V. (2025). Virtual companionship or flesh and blood: The effects of study-with-me (SWM) videos on learners' intrinsic motivation, perceived pressure, and performance. *Computers & Education*, 228, 105243.
- Szpunar, K. K., Khan, N. Y., & Schacter, D. L. (2013). Interpolated memory tests reduce mind wandering and improve learning of online lectures. *Proceedings of the National Academy of Sciences*, 110(16), 6313-6317.
- Yang, D., & Swekwi, U. (2021). The influence mechanism of loneliness to learning and its coping strategies in chinese college students. *International Journal of Learning, Teaching and Educational Research*, 20(9), 68-85.
- Zahariades, D. (2015). The Pomodoro technique: A 10-step action plan for increasing your productivity (1st electronic ed.). *Kindle Edition purchased from Amazon. com*, 96.