

A SOCIAL LEARNING NETWORK-BASED DIGITAL MEDITATION SPACE FOR METTA ‘LOVING-KINDNESS’ MEDITATION: GOMINDFUL APP

Johan Carly Saputra, Punaji Setyosari, Saida Ulfa

Educational Technology Department, State University of Malang, Malang, Indonesia
abhisaranojohan@gmail.com

Article History

Received: 07 February 2025, Accepted: 15 March 2025, Published: 20 May 2025

Abstrak

Penelitian ini menyelidiki desain, implementasi, dan evaluasi ruang meditasi digital baru, yaitu GoMindful App untuk Metta 'Loving-Kindness' Meditation dengan memanfaatkan kerangka jaringan pembelajaran sosial. Dikembangkan menggunakan model Lee & Owens, aplikasi ini memiliki fitur ruang meditasi, pelacak histori meditasi, jadwal meditasi, ruang obrolan dan konsultasi, materi meditasi, dan podcast. Hasil validasi menunjukkan tingkat kelayakan yang sangat tinggi, dan kepuasan pengguna dinilai sangat baik. Aplikasi ini secara efektif meningkatkan praktik Metta 'Loving-Kindness' Meditation dengan memberikan panduan yang terstruktur, membangun komunitas pendukung bagi para meditator melalui fitur interaktif, dan memfasilitasi konstruksi pengetahuan yang komprehensif tentang Metta 'Loving-Kindness' Meditation. Pembaruan konten yang rutin, penambahan fitur baru, dan kolaborasi dengan para ahli sangat penting untuk pengembangan lebih lanjut dan menjaga kualitas konten yang tinggi.

Kata Kunci: Ruang Meditasi Digital; GoMindful App; Social Learning Network; Metta 'Loving-Kindness' Meditation

Abstract

This study investigates the design, implementation, and evaluation of a novel digital meditation space, the GoMindful App for Metta 'Loving-Kindness' Meditation utilizing a social learning network framework. Developed using the Lee & Owens (2004) model, the app features a meditation room, meditation tracker, meditation schedule, chat room & consultation, meditation materials, and a podcast. Validation results showed high feasibility, and meditator satisfaction was rated excellent. The app effectively enhances Metta 'Loving-Kindness' Meditation by providing structured guidance, builds a supportive meditator community through interactive features, and facilitates comprehensive knowledge construction about Metta 'Loving-Kindness' Meditation. Regular content updates, new feature additions, and expert collaboration are essential for further development and maintaining high-quality content.

Keyword: Digital Meditation Space; GoMindful App; Social Learning Network; Metta 'Loving-Kindness' Meditation

To cite this article:

Saputra, J. C., Setyosari, P., & Ulfa, S. (2025). A Social Learning Network-Based Digital Meditation Space For Metta 'Loving-Kindness' Meditation: Gomindful App. *JKTP: Jurnal Kajian Teknologi Pendidikan*, 8(2), 107–117. doi: [10.17977/um038v8i22025p107](https://doi.org/10.17977/um038v8i22025p107)

INTRODUCTION

Meditation practices in Indonesia face various challenges, including limited programs, learning resources, and accessible meditation practices. Before the COVID-19 pandemic, meditation was predominantly conducted offline, creating accessibility and flexibility issues for practitioners, such as a shortage of meditation guides, high program costs, and less interactive teaching models. The shift to online meditation during the pandemic presented adaptation challenges in utilizing technology to support effective interaction and assessment between meditators and guides. With society becoming more accustomed to online platforms, (Ferdig et al., 2020; Rahardjo et al., 2019; Syahmi et al., 2022; Yuliana et al., 2022) emphasized the need for digital learning through mobile devices, enabling individuals to learn outside formal education and enhancing meditation motivation. A user-friendly, engaging, and beneficial app-based mindfulness learning system can improve community well-being (Burgess et al., 2022; Mahlo & Windsor, 2021). (Dabbagh et al., 2016) highlighted that flexible learning opportunities allow users to access resources and communicate globally, fostering broader and more independent lifelong learning opportunities.

Given these challenges, it is crucial to develop an online meditation platform that is accessible anytime and anywhere, provides clear guidance, integrates a database, remains open-access, and employs an interactive learning approach. Currently, structured and systematic virtual meditation learning that includes guided audio, materials, and progress tracking remains lacking. This deficiency results in irregular meditation development and difficulty finding a supportive community. Existing virtual meditation groups, such as WhatsApp groups, tend to be repetitive and lack an integrated database to track meditation progress, making it difficult for regular group meditators to adapt their practice and engage in discussions effectively.

The GoMindful App, a digital meditation space based on a social learning network for Metta 'Loving-Kindness' Meditation, offers a solution for regular group meditators. This approach facilitates networked learning, allowing meditators to share knowledge, motivate each other, and provide mutual support. Metta 'Loving-Kindness' Meditation's communal nature aligns well with the social learning network concept, enabling an inclusive and supportive learning environment. Consequently, learning Metta meditation through a social learning network can be more effective in fostering an interactive and engaging community. The GoMindful digital meditation space can complement traditional meditation programs and serve as a primary choice for those who prefer virtual practice.

Metta 'Loving-Kindness' Meditation is a Buddhist meditation practice aimed at developing compassion and happiness for oneself and all beings (Gunaratana, 2017; Ñāṇamoli, 2011; Shonin et al., 2016). This practice follows a step-by-step process, starting with oneself, then extending to a good friend, a neutral person, a person with negative thoughts, and ultimately all beings (Hofmann et al., 2011). Practitioners repeat positive phrases such as "May I be happy and free from suffering," gradually extending these wishes to all beings (Hofmann et al., 2011; Salzberg & Kabat-Zinn, 2020; Sujiva, 2004).

Sujiva (2004) introduced two models for learning Metta 'Loving-Kindness' Meditation: the squarish arrangement and the circular arrangement. The circular arrangement is considered more effective as it allows meditators to face each other, facilitating the exchange of loving-kindness. In digital meditation spaces, this arrangement can be recreated using platforms like the GoMindful App, which visually arranges meditators in a circular formation during a Zoom session with immersive view features. This setup enhances face-to-face interaction, essential in Metta meditation. Facilitators can position themselves at the center or top of the screen to guide sessions

clearly. Additional features such as emoji reactions, chat, and breakout rooms can further enrich the experience by maintaining a supportive atmosphere.

A social learning network (SLN) in education supports interaction and collaboration. Barrot & Acomular (2022) identified five key SLN features: chat, posting and sharing, comments, video calls, and flexibility. Applicable audio and video materials are crucial in SLN (As'at et al., 2017), while meditation mentors play a vital role in optimizing topics and interactive activities (Xu et al., 2021). Online consultation features can help address stress and anxiety (Bringula et al., 2021). SLN sustain meditation practice through communication, discussion, collaboration, and shared experiences (Lelasari et al., 2018; Mardiati et al., 2021; Rochmah & Abdul Majid, 2018; Ulfa et al., 2024). The connectivism principle in SLN enables users to develop understanding through online interactions and digital knowledge resources (Dziubaniuk et al., 2023).

Compared to mindfulness programs available in other countries, mindfulness education and practice in Indonesia remain limited. Research by Martin & Betrus (2019) highlights the increasing use of mobile apps with features like VR, AR, and AI for academic learning and training. Mindfulness programs in the U.S. are costly and less effective compared to commercial Mindfulness-Based Apps (MBAs) like 10% Happier (Hendricks et al., 2020). In Europe, 605 commercial MBAs focus on mindfulness, meditation, and yoga, but most lack proper privacy policies (Schultchen et al., 2021). Roquet & Sas (2018) observed that most MBAs offer meditation guidance but lack features for tracking progress and measuring effectiveness. Current programs primarily focus on stress reduction (Belen, 2022; Liu et al., 2022), improving sleep (Weekly et al., 2018), PTSD treatment (Reyes, 2022), enhancing mental and physical health (Athanas et al., 2021; Cox et al., 2019; Hendricks et al., 2020), and boosting creativity and productivity (Henriksen et al., 2020; Toniolo-Barrios & Pitt, 2021).

Weekly et al. (2018) categorized existing app-based programs into four techniques: (1) mindfulness, (2) yoga or body movement, (3) meditation, hypnosis, or visualization, and (4) body scanning. However, structured and systematic Metta 'Loving-Kindness' Meditation remains underexplored. Both MBAs and in-person mindfulness programs significantly impact self-compassion and mindfulness (Orosa-Duarte et al., 2021). González-Gómez (2021) found that compassion-based meditation effectively increases loving-kindness, even among beginners. While Jon Kabat-Zinn's Mindfulness-Based Stress Reduction (MBSR) integrates Buddhist psychological insights (Simpson, 2017), a structured Metta meditation approach rooted in Buddhist teachings can provide a similar balance.

The GoMindful App integrates traditional Eastern meditation with modern digital approaches, fostering interaction between guides and meditators, as well as among meditators. It offers systematic learning materials, guided meditation audio for independent practice, and an integrated database for tracking meditation progress. This combination is expected to provide a unique and enriching learning experience in Metta 'Loving-Kindness' Meditation.

METHOD

The multimedia needs assessment for the GoMindful App was conducted via Zoom conversations with five regular meditators. Findings revealed several obstacles, including the lack of educational materials in Indonesian, high bandwidth requirements for interactive learning, and a superficial WhatsApp community. Meditators expressed interest in an online mobile platform providing structured and interactive meditation, including arranged audio guides, meditation schedules, discussion zones, and practical learning materials. Key features include group and individual meditation rooms, meditation trackers, chat rooms, consultations, and meditation resources. The development team comprises researchers, programmers, and professionals responsible for UI

design, backend development, and platform evaluation using feedback. The app is built for Android using JavaScript and React Native, with PHP and Laravel for the backend.

The GoMindful App follows the conceptual framework of Lee & Owens (2004) and was tested on regular meditators. It provides resources for Metta 'Loving-Kindness' Meditation, integrates with ZOOM Meeting for group meditation, and includes goal-setting and progress tracking features. Multimedia evaluations were conducted to assess instructional effectiveness and meditation techniques. Feasibility tests, material assessments, and user trials were conducted, along with Mobile App Rating Scales (MARS) to measure meditator satisfaction. Evaluation instruments were developed for media and learning experts, focusing on meditator satisfaction. Data were collected via questionnaires using a 1-5 Likert scale to determine feasibility and validity. Analysis helped identify areas for improvement and ensure quality.

Study participants were regular meditators engaged in group meditation, specifically those practicing Metta 'Loving-Kindness' Meditation for 3 to 30 days as part of the 30 Days Challenge. The study had no time restrictions.

Learning activities in the GoMindful App involve self-directed and networked learning. Meditator satisfaction tests were conducted in three phases: a small-scale test with three individuals, another with eight, and a field test with twenty participants. Feasibility was measured based on expert assessments using a 1-5 Likert scale. Evaluation instruments covered media, learning, and Metta 'Loving-Kindness' Meditation content.

The instrument for media experts included 2 aspects with 25 indicators, while learning experts assessed 3 aspects with 20 indicators. The subject matter validation test covered 3 aspects with 1 indicator. The meditator feedback instrument had three aspects—media, learning, and material—with 31 indicators.

Table 1. The collected data were then converted using the criteria for feasibility levels

No.	Score Range	Qualification	Equivalent/Explanation
1	80% - 100%	Very Good	Very valid, no revision
2	60% - 79%	Good	Valid, no revision
3	40% - 59%	Fairly Good	Fairly valid, needs revision
4	20% - 39%	Not Good	Less valid, needs revision
5	0% - 19%	Very Not Good	Not valid, needs revision

According to Table 1, feasibility scores from media, learning, and subject matter experts determined validity levels, categorized as very good, good, fairly good, not good, and very not good. These categories guided necessary revisions to enhance the Digital Meditation Space: GoMindful App's effectiveness and usability.

RESULT

The sentence above references Table 2, which shows the types of learning activities in the Digital Meditation Space: GoMindful App. These activities are divided into two types: independent learning and networked learning.

On the main menu display, as shown in Figure 1 regarding the digital meditation space architecture of the GoMindful App, meditators can select specific features they desire within the application. If a meditator wants to meditate, they simply need to tap 'go' in the 'meditate' section. Additionally, they can easily track their meditation duration by tapping 'go' in the 'meditation tracker' section. For more information, meditators can tap 'meditation schedule' to view daily or weekly group meditation schedules. The 'chat room & consultation' feature allows meditators to interact with groups and consult with meditation guides. Moreover, meditators can watch short

videos related to meditation by tapping ‘meditation material’ or access the latest episodes of GoMindful Talk - Insight on the YouTube Channel by tapping ‘Podcast’.

Tabel 2. Types of Learning Activities in the Digital Meditation Space: GoMindful App

Syntax	Independent	Networked
Meditation room	<ol style="list-style-type: none"> 1. Start Self Meditation 2. Chose guided audio 3. Start and end meditation session 4. Record meditation duration 	<ol style="list-style-type: none"> 1. Start Group Meditation 2. Connect to ZOOM Meeting 3. Use guided audio 4. Record meditation duration
Meditation tracker	Meditators can see the accumulated meditation duration and check the sessions they have completed.	
Meditation goals	Meditators can add meditation goals, check, and fulfill their goals.	
Meditation schedule	-	<ol style="list-style-type: none"> 1. Choose group meditation schedule 2. Access the meditation room 3. Start Group meditation session 4. Submit meditation session
Group Chat	-	Discuss in the group chat room via 'group chat' tap, connecting to WhatsApp Group with other meditators.
Private ‘Consultation’ Chat	-	Connect meditators to meditation guides via personal WhatsApp Chat for private consultations.
Meditation material	Access structured meditation video materials based on levels. This feature tracks meditator progress as they complete video materials and level up.	
Podcast	Meditators can listen to conversations available in the Podcast feature, regularly updated in the digital meditation space: GoMindful App.	

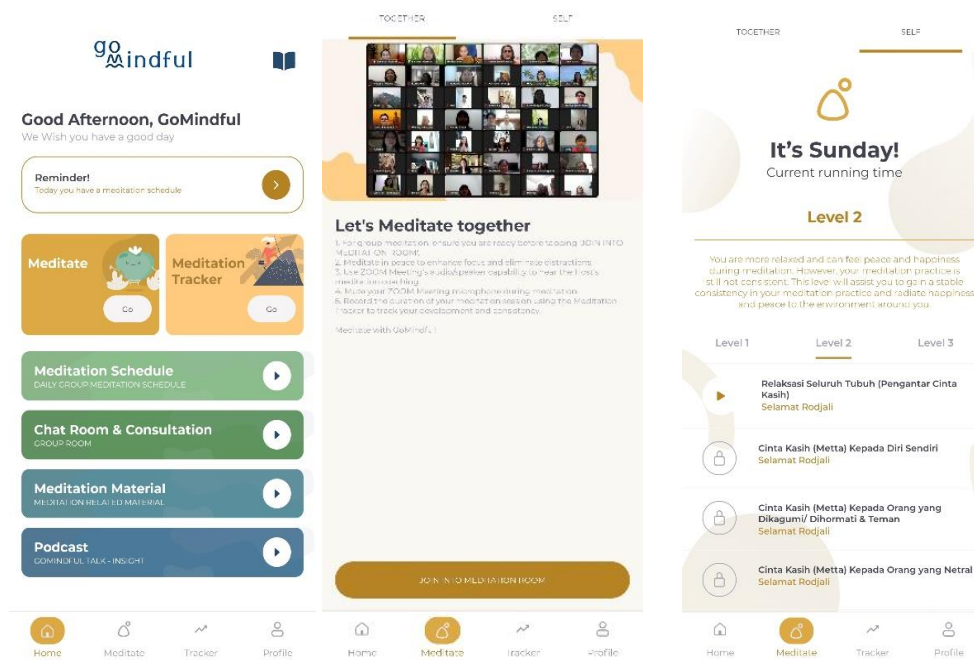


Figure 1. Architecture of Digital Meditation Space: GoMindful

Table 3 presents the feasibility assessment scores for the Digital Meditation Space: GoMindful App, covering various aspects tested to determine its usability and effectiveness. The GoMindful App underwent rigorous testing across multiple evaluation stages, demonstrating exceptional performance and validation. Media experts awarded the application a perfect score of 100% for both its display and functionality in learning. Learning experts assessed three key aspects—skill development (100%), the role of the application in learning (95%), and learning

strategy (100%)—resulting in an average score of 98%. Subject matter experts evaluated content accuracy (100%), substance (94.28%), and the learning aspect (100%), leading to an average score of 98.09%. In the individual test involving three regular meditators, the app achieved an average score of 97.42% across media, learning, and material aspects. A small-scale test with eight meditators yielded a score of 91.53% based on 31 indicators covering the same three aspects. Finally, in a broader field test with twenty meditators, the platform received an average score of 87.29%, confirming its categorization as "very good" and highlighting its strong feasibility and user satisfaction.

Table 3. Feasibility Assessment Scores for the Digital Meditation Space

Test Type	Aspect	Percentage (%)
Media Test	Application Display	100
	Application Function in Learning	100
	Average Score	100
Learning Test	Skill Development	100
	Role of Application in Learning	95
	Learning Strategy	100
	Average Score	98
Material Test	Material Accuracy	100
	Material Substance	94.28
	Learning Aspect	100
	Average Score	98.09
Individual Test	Media, Learning, and Material	97.42
Small Scale Test	Media, Learning, and Material	91.53
Field Test	Media, Learning, and Material	87.29

DISCUSSION

The GoMindful App has completed a rigorous review process that specifically targeted three crucial areas: product analysis, SWOT analysis, and requirements analysis. The product analysis reveals the app's outstanding performance in the areas of media, learning, and content. The media evaluation of the GoMindful App reveals its exceptional design and functioning, attaining a flawless score of 100% across many indications such as user interface aesthetics, navigation, and responsiveness. This implies that the GoMindful App provides a smooth and aesthetically pleasing experience for its meditators. The functionality assessment highlights the reliability and high performance of the system, as evidenced by a perfect score demonstrating the absence of bugs and robust operational capabilities. User feedback indicates that meditators are satisfied with the navigation, both video and audio playback, and interactivity. However, some meditators have commented on a desire for enhanced visual presentation and additional functionality like as dark mode and responsive notifications.

The app's validation results show its strong validity and feasibility as a teaching tool for Metta 'Loving-Kindness' Meditation, indicating its effectiveness for learning purposes. The GoMindful App's validity to enhance Metta 'Loving-Kindness' Meditation skills was evaluated by learning theory experts, who awarded it an ideal score of 100%. They acknowledged its systematic approach, explicit instructions, and capability for enhancing meditator involvement. The app received excellent praise for its ability to promote active engagement, offer valuable feedback, and facilitate meaningful connection among meditators, achieving an average score of 95%. The learning methodologies utilized are in accordance with the principles of Metta Meditation, incorporating multimedia and real-time interactions to optimize the learning process. Nevertheless, there is scope for enhancement in terms of updating the information and guaranteeing user-friendliness for individuals of all age brackets. Based on meditator input, it has been determined

that the app is successful in enhancing Metta 'Loving-Kindness' Meditation skills. However, there is a need for an increased variety of content and features that are specifically designed for various levels of competency.

The evaluation of the content component emphasizes the GoMindful App's effectiveness in providing precise, substantial, and encouraging teaching material. The accuracy of the content achieved a perfect score of 100%, indicating that it is fully aligned with the established curricula and meditation objectives. The received material achieved a commendable rating of 94.28%, however, there is need for further investigation and the inclusion of more reliable sources. Meditators value the app's feasibility to facilitate self-directed learning and motivation, as seen by high scores indicating active involvement in meditation practice. Nevertheless, feedback indicates the necessity for increased content, such as additional varieties of meditation, and enhanced goal-setting capabilities. The app is renowned for its intuitive interface, but, several technological challenges such as registration complications and app responsiveness require attention in order to improve meditator convenience. In general, the GoMindful App is widely considered to be a highly efficient tool for educating individuals about Metta 'Loving-Kindness' Meditation. It provides newcomers with easily understandable material and motivational features, while there is still potential for enhancing both the content and performance of the app.

The GoMindful App, specifically developed for Metta 'Loving-Kindness' Meditation, has significant benefits that provide it a beneficial tool for meditator practicing meditation. The GoMindful app offers a comprehensive and pleasant Metta 'Loving-Kindness' Meditation experience via a platform that facilitates social learning and networking. Featuring an appealing design and a user-friendly interface (UI), meditators can effortlessly access and enjoy a visually engaging setting. The GoMindful App's optimal functionality, which includes icons and buttons that respond quickly and effectively, ensures a smooth and effortless user experience (UX). The GoMindful App effectively facilitates meditators in cultivating fundamental skills in Metta 'Loving-Kindness' Meditation through its offering of detailed direction and features such as progress monitoring and social support, which enhance consistency and individual development. In addition, the GoMindful App offers comprehensive instructional support through interactive forums with easy access to meditation mentors, establishing an inclusive and helpful learning community.

Nevertheless, despite its significant benefits, the GoMindful App does have a few weaknesses that require attention. Several meditators have encountered problems with the visual design, including excessively huge fonts and overloaded home pages, which negatively impact the user experience (UX). The meditation content involves consistent revisions to uphold its relevance and quality, while also allowing for enhancements in the comprehensiveness and quality of explanations and references. Additionally, there have been observations of technical challenges, such as difficulty with the sign-up process and the system's responsiveness to user inputs. These features require enhancement to optimize meditator satisfaction and ensure the GoMindful App's efficacy as a meditation aid.

In the future, the GoMindful App has many possibilities to improve its attractiveness and functionality. The application has the potential to integrate additional functionalities, such as a dark mode to enhance visual comfort, and broaden its range of meditation options by adding techniques like Anapanasati, which focuses on mindfulness of breathing. To increase the meditator population and foster growth within the meditation community, it would be beneficial to enhance the instructional content's depth and broaden the social interaction elements. The GoMindful App can enhance its competitiveness by maintaining user-friendliness across all demographics and

technological skill levels, overcoming limitations caused by competition from competing meditation apps and different device compatibility. Tackling these obstacles will assist the application in maintaining and expanding its meditator community, providing an exceptional meditation encounter.

The GoMindful App for Metta 'Loving-Kindness' Meditation requires a comprehensive set of specifications to operate efficiently as a digital meditation platform built on a social learning network. A stable and responsive technical infrastructure is a crucial need. This requires a trustworthy server and efficient network connectivity to provide uninterrupted accessibility of the app to meditators at all times. In addition, the application must have compatibility with a wide variety of devices, operating systems, and software versions in order to optimize accessibility and inclusivity. By attending to these infrastructure requirements, the GoMindful App can offer a smooth Metta 'Loving-Kindness' Meditation experience and facilitate the expansion of a diverse online meditation community.

Ensuring data security is a crucial necessity for the GoMindful App. Ensuring the security of meditators' personal data is crucial for preserving trust and privacy. In order to ensure this, the GoMindful App must use strong encryption methods to protect meditator data from illegal access or breaches. Secure authentication methods, such as two-factor authentication or biometric authentication, are crucial in order to prevent unauthorized access to meditator accounts. By establishing data security as a top priority, the mobileapp can establish itself as a reliable platform where meditators may participate in meditation without any worries about their personal information being exposed or their accounts being used improperly.

Finally, the app's user interface (UI/UX) design, content, and support accessibility play an important part in providing a significant meditation experience. A well-designed user interface and user experience (UI/UX) ensure that meditators can easily navigate the application, because of sensible layouts and visually attractive components that promote meditator convenience. The content should encompass a wide range of topics, be of excellent quality, and be consistently refreshed to accommodate the needs of meditators at all levels of experience, ranging from beginners to advanced practitioners. Moreover, the inclusion of social interaction elements such as group chat and community support are crucial for cultivating a sense of connection and motivation along the meditation journey. Offering extensive assistance, encompassing technical aid and instruction in meditation, is crucial for aiding meditators in overcoming difficulties and enhancing their Metta 'Loving-Kindness' Meditation routines. By fulfilling these criteria, the GoMindful App has the potential to become a comprehensive and user-friendly platform that enhances the Metta 'Loving-Kindness' Meditation experience and establishes itself as a trustworthy instructional tool.

CONCLUSION

The GoMindful App is a digital meditation space for Metta 'Loving-Kindness' Meditation based on a social learning network, featuring six main functionalities: Meditation Room, Meditation Tracker, Meditation Schedule, Chat Room & Consultation, Meditation Material, and Podcast. With an impressive 87.29% satisfaction rate, the app has demonstrated excellent feasibility and high meditator satisfaction, confirming its categorization as very good. Its main strengths lie in its attractive design, optimal functionality, and effectiveness in meditation learning, supporting the potential for new feature development and expansion in digital meditation. However, challenges such as competition with other meditation apps, technological differences, and user adaptation require strategic improvements in technical infrastructure, data security, UI design, and high-quality learning content. Designed for daily meditation practice, the GoMindful App enhances

motivation, fosters a community of meditators, and facilitates structured knowledge construction on Metta Meditation. Future development should focus on updating and enhancing content, adding new features, expanding reach, ensuring data security, strengthening infrastructure, refining UI design, improving user support, and collaborating with experts to further elevate its impact.

ACKNOWLEDGE

I extend my heartfelt gratitude to those who made this thesis and the GoMindful App development possible. Thank you the Pentamoo for their crucial contributions to app development and design. Your support has been essential to the success of this project.

REFERENCES

- As'at, M., Setyosari, P., & Ulfa, S. (2017). The Development of English Instructional Design Social Learning Network (SLN)-Based Using Auction (Interested- Based Negotiation) Strategy. *JINOTEP (Jurnal Inovasi Dan Teknologi Pembelajaran) Kajian Dan Riset Dalam Teknologi Pembelajaran*, 4(1), 15–21.
- Athanas, A., McCarrison, J., Campistron, J., Bender, N., Price, J., Smalley, S., & Schork, N. J. (2021). Characterizing Emotional State Transitions During Prolonged Use of A Mindfulness and Meditation App: Observational Study. *JMIR Mental Health*, 8(3). <https://doi.org/10.2196/19832>
- Barrot, J. S., & Acomular, D. R. (2022). How University Teachers Navigate Social Networking Sites in A Fully Online Space: Provisional Views from A Developing Nation. *International Journal of Educational Technology in Higher Education*, 19(1). <https://doi.org/10.1186/s41239-022-00357-3>
- Belen, H. (2022). Fear of COVID-19 and Mental Health: The Role of Mindfulness in During Times of Crisis. *International Journal of Mental Health and Addiction*, 20(1), 607–618. <https://doi.org/10.1007/s11469-020-00470-2>
- Bringula, R., Reguyal, J. J., Tan, D. D., & Ulfa, S. (2021). Mathematics Self-Concept and Challenges of Learners in An Online Learning Environment During COVID-19 Pandemic. *Smart Learning Environments*, 8(1). <https://doi.org/10.1186/s40561-021-00168-5>
- Burgess, A., Cavanagh, K., Strauss, C., & Oliver, B. R. (2022). Headspace for Parents: Qualitative Report Investigating The Use of A Mindfulness-Based App for Managing Parents' Stress During COVID-19. *BJPsych Open*, 8(1), 1–8. <https://doi.org/10.1192/bjo.2021.1070>
- Cox, C. E., Hough, C. L., Jones, D. M., Ungar, A., Reagan, W., Key, M. D., Gremore, T., Olsen, M. K., Sanders, L., Greeson, J. M., & Porter, L. S. (2019). Effects of Mindfulness Training Programmes Delivered by A Self-Directed Mobile App and by Telephone Compared With An Education Programme For Survivors of Critical Illness: A Pilot Randomised Clinical Trial. *Thorax*, 74(1), 33–42. <https://doi.org/10.1136/thoraxjnl-2017-211264>
- Dabbagh, N., Benson, A. D., Denham, A., Joseph, R., Al-Freih, M., Zgheib, G., Fake, H., & Guo, Z. (2016). *Learning Technologies and Globalization: Pedagogical Frameworks and Applications* (1st ed.). Springer. <https://doi.org/10.1007/978-3-319-22963-8>
- Dziubaniuk, O., Ivanova-Gongne, M., & Nyholm, M. (2023). Learning and Teaching Sustainable Business in The Digital Era: A Connectivism Theory Approach. *International Journal of Educational Technology in Higher Education*, 20(1), 1–23. <https://doi.org/10.1186/s41239-023-00390-w>
- Ferdig, R. E., Baumgartner, E., Hartshorne, R., Kaplan-Rakowski, R., & Mouza, C. (2020). Teaching, Technology, and Teacher Education During the COVID-19 Pandemic: Stories from the Field. <https://www.learntechlib.org/p/216903/>
- González-Gómez, A. L. (2021). Descriptive and quasi-experimental studies about moral emotions, online empathy, anger management, and their relations with key competencies in primary

- education. *International Journal of Environmental Research and Public Health*, 18(21). <https://doi.org/10.3390/ijerph182111584>
- Gunaratana, H. (2017). *Loving-Kindness in Plain English: The Practice of Metta*. Wisdom Publications. <https://books.google.co.id/books?id=Ek3YDAAAQBAJ>
- Hendricks, D. S., Lavery, M. R., Bouillon, L. E., & Gotfried, R. S. (2020). Evaluating The Effectiveness of A Mindfulness App Among Academic Advisors. *Journal of Technology in Behavioral Science*, 5(2), 149–155. <https://doi.org/10.1007/s41347-019-00122-w>
- Henriksen, D., Richardson, C., & Shack, K. (2020). Mindfulness and Creativity: Implications for Thinking and Learning. *Thinking Skills and Creativity*, 37. <https://doi.org/10.1016/j.tsc.2020.100689>
- Hofmann, S. G., Grossman, P., & Hinton, D. E. (2011). Loving-Kindness and Compassion Meditation: Potential For Psychological Interventions. *Clinical Psychology Review*, 31(7), 1126–1132. <https://doi.org/10.1016/j.cpr.2011.07.003>
- Lee, W. W., & Owens, D. L. (2004). *Multimedia-based Instructional Design: Computer-based Training, Web-based Training, Distance Broadcast Training, Performance-based Solutions* (2nd ed.). John Wiley & Sons, Inc. <https://books.google.co.id/books?id=b1Giy2zCxIsC>
- Lelasari, M., Setyosari, P., & Ulfa, S. (2018). Networked Learning Dengan Strategi Problem Solving pada Mata Pelajaran Simulasi Digital. *JINOTEP (Jurnal Inovasi Dan Teknologi Pembelajaran) Kajian Dan Riset Dalam Teknologi Pembelajaran*, 5(1), 15–23.
- Liu, M., Wu, B., Li, F., Wang, X., & Geng, F. (2022). Does mindfulness reduce trolling? The relationship between trait mindfulness and online trolling: The mediating role of anger rumination and the moderating role of online disinhibition. *Journal of Affective Disorders*, 301, 36–43. <https://doi.org/10.1016/j.jad.2022.01.023>
- Mahlo, L., & Windsor, T. D. (2021). Feasibility, Acceptability, and Preliminary Efficacy of an App-Based Mindfulness-Meditation Program Among Older Adults. *The Gerontologist*, 61(5), 775–786. <https://doi.org/10.1093/geront/gnaa093>
- Mardiati, Y., Kunto, I., & Kustandi, C. (2021). A Learning Development Based on Social Learning Networks Microsoft Teams in Animation Courses. *Jurnal Pembelajaran Inovatif*, 4(1), 35–42. <https://doi.org/10.21009/jpi.041.05>
- Martin, F., & Betrus, A. K. K. (2019). *Digital Media for Learning: Theories, Processes, and Solutions*. In *Digital Media for Learning: Theories, Processes, and Solutions* (1st ed.). Springer Nature Switzerland AG. <https://doi.org/10.1007/978-3-030-33120-7>
- Ñāṇamoli, B. (2011). *The Path of Purification: Visuddhimagga by Buddhaghosa* Buddhaghosa (4th ed.). Buddhist Publication Society. <https://www.accesstoinsight.org/lib/authors/nanamoli/PathofPurification2011.pdf>
- Orosa-Duarte, Á., Mediavilla, R., Muñoz-Sanjose, A., Palao, Á., Garde, J., López-Herrero, V., Bravo-Ortiz, M. F., Bayón, C., & Rodríguez-Vega, B. (2021). Mindfulness-Based Mobile App Reduces Anxiety and Increases Self-Compassion in Healthcare Students: A Randomised Controlled Trial. *Medical Teacher*, 43(6), 686–693. <https://doi.org/10.1080/0142159X.2021.1887835>
- Rahardjo, T., Degeng, N., & Soepriyanto, Y. (2019). Pengembangan Multimedia Interaktif Mobile Learning Berbasis Anrdroid Aksara Jawa Kelas X Smk Negeri 5 Malang. *JKTP: Jurnal Kajian Teknologi Pendidikan*, 2(3), 195–202. <https://doi.org/10.17977/um038v2i32019p195>
- Reyes, A. T. (2022). The Process of Learning Mindfulness and Acceptance Through The Use of a Mobile App Based on Acceptance and Commitment Therapy: A Grounded Theory Analysis. *Issues in Mental Health Nursing*, 43(1), 3–12. <https://doi.org/10.1080/01612840.2021.1953652>

- Rochmah, E., & Abdul Majid, N. W. (2018). Membangun Virtual Classroom Melalui Social Learning Networks (SLNS). *Premiere Educandum: Jurnal Pendidikan Dasar Dan Pembelajaran*, 8(1), 15. <https://doi.org/10.25273/pe.v8i1.1832>
- Roquet, C. D., & Sas, C. (2018). Evaluating Mindfulness Meditation Apps. *Conference on Human Factors in Computing Systems - Proceedings*, 2018-April. <https://doi.org/10.1145/3170427.3188616>
- Salzberg, S., & Kabat-Zinn, J. (2020). *Lovingkindness: The Revolutionary Art of Happiness*. Shambhala. <https://books.google.co.id/books?id=SzHJDwAAQBAJ>
- Schultchen, D., Terhorst, Y., Holderied, T., Stach, M., Messner, E. M., Baumeister, H., & Sander, L. B. (2021). Stay Present with Your Phone: A Systematic Review and Standardized Rating of Mindfulness Apps in European App Stores. *International Journal of Behavioral Medicine*, 28(5), 552–560. <https://doi.org/10.1007/s12529-020-09944-y>
- Shonin, E., Van Gordon, W., & Griffiths, M. D. (2016). Mindfulness and Buddhist-Derived Approaches in Mental Health and Addiction. In *Mindfulness and Buddhist-Derived Approaches in Mental Health and Addiction*. Springer International Publishing. <https://doi.org/10.1007/978-3-319-22255-4>
- Simpson, D. (2017). From Me To We: Revolutionising Mindfulness In Schools. *Contemporary Buddhism*, 18(1), 47–71. <https://doi.org/10.1080/14639947.2017.1301032>
- Sujiva, V. (2004). *Meditation on and Other Sublime States*. Buddhist Wisdom Centre.
- Syahmi, F. A., Ulfa, S., & Susilaningsih. (2022). Pengembangan Media Pembelajaran Komik Digital Berbasis Smartphone Untuk Siswa Sekolah Dasar. *JKTP: Jurnal Kajian Teknologi Pendidikan*, 5(1), 81–90. <https://doi.org/10.17977/um038v5i12022p081>
- Toniolo-Barrios, M., & Pitt, L. (2021). Mindfulness and The Challenges of Working From Home in Times of Crisis. *Business Horizons*, 64(2), 189–197. <https://doi.org/10.1016/j.bushor.2020.09.004>
- Ulfa, S., Surahman, E., Fatawi, I., & Tsukasa, H. (2024). Task-Technology Fit Analysis: Measuring The Factors That Influence Behavioural Intention to Use The Online Summary-with Automated Feedback in A MOOCS Platform. *Electronic Journal of E-Learning*, 22(1), 63–77. <https://doi.org/10.34190/ejel.22.1.3094>
- Weekly, T., Walker, N., Beck, J., Akers, S., & Weaver, M. (2018). A Review of Apps For Calming, Relaxation, and Mindfulness Interventions For Pediatric Palliative Care Patients. *Children*, 5(2). <https://doi.org/10.3390/children5020016>
- Xu, T., Wu, Q., & Xu, Z. (2021). The Impact of Online Learners' Social Interaction on Learning Achievement Based on Social Network Analysis. *2021 9th International Conference on Information and Education Technology, ICIET 2021*, 232–241. <https://doi.org/10.1109/ICIET51873.2021.9419643>
- Yuliana, F. D., Susilaningsih, & Abidin, Z. (2022). Pengembangan Multimedia Interaktif Berbasis Mobile Pada Bahasa Inggris. *JKTP: Jurnal Kajian Teknologi Pendidikan*, 5(1), 11–21. <https://doi.org/10.17977/um038v5i12022p011>