



Interactive Digital Learning Media Based on Nearpod to Mitigate the Decline of Focus Due to Brainrot

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Abstract

The phenomenon of brainrot, or “brain decay,” caused by excessive exposure to fast-paced digital content such as TikTok, Instagram Reels, and YouTube Shorts, poses a serious challenge in education. Such overstimulation reduces students’ focus, attention control, and learning motivation. This study aims to explain how interactive digital learning media based on Nearpod can serve as a solution to overcome decreased learning focus due to brainrot. This research adopts a qualitative descriptive method based on literature studies, supported by in-depth interviews and documentation of Nearpod-based media design. The findings indicate that Nearpod’s interactive features—quizzes, videos, polls, and collaborative boards—are effective in maintaining students’ attention and engagement during lessons. Visually engaging content and structured materials help redirect students’ focus, even for those affected by brainrot. The implication of this study highlights the importance for educators to integrate adaptive digital learning media to keep students actively involved and prevent excessive dependence on instant digital content

Keywords: brainrot, learning media, Nearpod

1. Introduction

In today's digital era, the phenomenon of brainrot—literally meaning "brain decay"—is increasingly gaining attention, particularly in the context of education (Aribowo et al., 2025). This term refers to a condition in which individuals become excessively dependent on shallow and repetitive digital content, such as short videos on TikTok, Instagram Reels, and YouTube Shorts. In the context of student learning, overexposure to such content has affected their cognitive abilities (Bandung, 2025). This impact is especially evident in aspects such as memory retention, concentration, and the processing of complex information. Symptoms of brainrot are commonly marked by habits of spending hours in front of screens, experiencing anxiety when away from digital devices, and a declining ability to focus on productive activities (Yousef et al., 2025). In a qualitative interview with a Grade 11 student from Al-Madaniyah High School, identified as YH, he stated, *“I can play games for more than 3 hours, and sometimes even 8 hours if I don't have any homework. Especially during school holidays, I often binge short videos like TikTok from morning to evening without realizing I've been on my phone all day.”* This phenomenon is not just a typical negative behavior, but rather a form of digital overstimulation that can endanger mental development, particularly in children.

This is not merely an assumption. A study by (Lakilaki et al., 2025) revealed that excessive exposure to digital media, especially low-quality content, directly contributes to a decline in internal attention control among elementary school students. Students affected by brainrot tend to struggle with focusing during lessons and are more easily distracted by external stimuli. Yet, elementary school is a critical period for building children's cognitive foundations. This concern was also voiced by an elementary school teacher, identified as S, who shared in an interview, *“Many of my students now find it extremely difficult to focus during lessons. I notice they are easily distracted. When asked questions, they often can't answer. Upon closer observation, I found out that after school, they often gather at nearby shops with Wi-Fi access, playing games for hours without realizing the time, even though they are still in elementary school—a stage where thinking skills should be developed.”* This statement clearly shows that children’s habits of accessing digital content after school directly affect their ability to learn in class. If focus and attention are already disrupted at this early stage, even greater challenges will likely emerge in middle or high school.

In such conditions, the role of teachers becomes crucial. Teachers are not only responsible for delivering content but must also act as facilitators who create adaptive learning environments in response to the challenges of the times (Sari et al., 2025). One way to address this issue is by developing engaging and interactive learning media that keeps students actively involved without becoming bored. In addition, parental support is also essential, particularly in

limiting children's access to gadgets and supervising their digital content consumption. Unfortunately, many parents remain indifferent to this matter, leaving the responsibility of digital education solely on the shoulders of teachers (Armini, 2024).

Given this phenomenon, this study seeks to offer a solution by developing interactive digital learning media based on Nearpod. Nearpod was chosen due to its features that support visual, dynamic, and responsive material delivery, which can help re-engage students whose attention spans have been affected by fast-paced content (Rabeka, 2024). This platform also promotes active student engagement through quizzes, polls, and simulations-transforming students from passive viewers into active participants in the learning process. Therefore, Nearpod is expected to serve as an effective tool to combat the symptoms of brainrot and enhance students' learning focus.

The novelty of this research lies in its integration of the brainrot phenomenon-still rarely explored in educational contexts-with the approach of digital learning media development. Most existing studies on brainrot focus on the psychological and social impacts of digital overstimulation or on students' poor self-control in using social media. However, few studies have attempted to create concrete learning interventions using interactive digital media within the educational domain. For instance, the study by (Putra & Nasution, 2024) only discusses digital media literacy for preventing brainrot, without developing any learning media.

Therefore, this research is expected to contribute to the development of learning media that are not only technologically innovative but also responsive to contemporary psychological challenges. The hope is that this study can inspire educators and policymakers to design learning approaches that are more adaptive to students' conditions in today's digital era.

2. Methodology

His research employs a descriptive qualitative approach based on a literature study, aiming to theoretically explain how interactive digital learning media based on Nearpod can be utilized as a solution to address the decline in learning focus caused by the phenomenon of brainrot (Saefullah, 2024). This approach was chosen because the study seeks to explore the relationship between the decline in students' concentration and the potential of Nearpod as an interactive, responsive, and adaptive learning tool in the face of contemporary challenges. In addition to reviewing relevant theories and previous studies, this research also includes documentation of media content directly designed and developed by the researcher.

The data sources were obtained through literature analysis from various scholarly journals discussing the concepts of brainrot, cognitive psychology, and the use of Nearpod in education (Millah et al., 2023). In addition, supporting data were collected through in-depth interviews with teachers and students to gain their perspectives on symptoms of declining focus and the effectiveness of interactive media. The researcher also compiled documentation of Nearpod-based media as a prototype tailored to specific learning needs. All data were analyzed descriptively to provide a comprehensive overview of how Nearpod can serve as an educational alternative to mitigate the loss of focus resulting from brainrot.

3. Results and Discussion

Interactive Learning Media Nearpod

Nearpod is an interactive digital platform designed to help teachers create more engaging and dynamic learning experiences that actively involve students (Maharani et al., 2024). This platform is freely accessible via its official website, and users can log in using a Google account to begin designing instructional materials.



Figure 1. Nearpod Home and Login Display

His image displays the homepage of the Nearpod platform, which can be accessed via <https://nearpod.com>. On this page, users can log in using a Google account as the initial step to begin creating instructional materials. Nearpod's primary advantage lies in its ability to combine learning content with a variety of engaging activities such as quizzes, polls, discussions, and live simulations, which help maintain students' focus throughout the learning process. These features not only make learning more vibrant and enjoyable but also encourage students to actively participate rather than simply receive information. This advantage is supported by research conducted by (Iga & Camellia, 2024) which shows that interactive learning media significantly improve student motivation and concentration through direct participation. This aligns with the findings of (Anggraeni & Mintohari, 2024) who reported that Nearpod-based interactive learning media achieved a learning mastery rate of 86%, categorized as very good. The appealing visual design and structured flow of the material have proven effective in optimizing students' attention during lessons.

Creating materials on Nearpod is also very simple. First, the teacher needs to choose a topic or Basic Competency (Kompetensi Dasar) to be taught. For example, a Social and Cultural History of Islam (SKI) topic on "The Strategic Steps of Prophet Muhammad SAW's Da'wah in Mecca". After selecting the topic, the teacher can begin designing instructional slides using the templates provided by Nearpod.



Figure 2. Nearpod Dashboard and “Create Lesson” Menu

After successfully logging in, users are directed to the main Nearpod dashboard. In this section, there is a “Create” feature that allows users to start developing their own learning media.

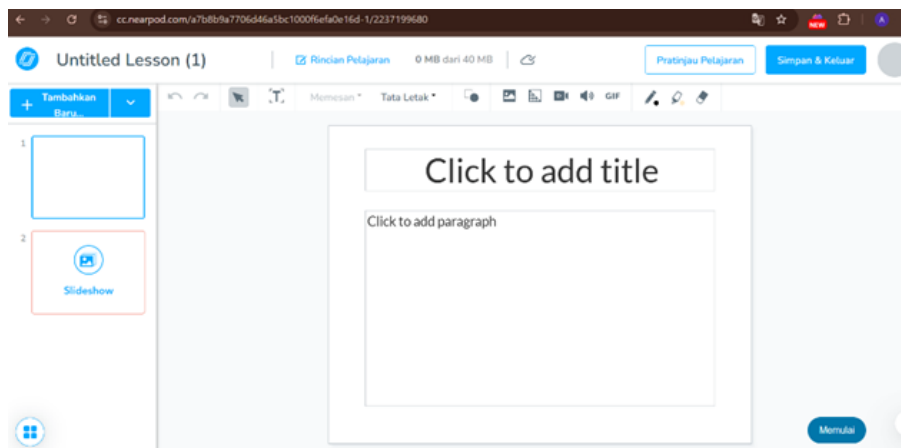


Figure 3. Lesson Slide Creation Display

The following image shows the process of creating instructional slides that has been initiated. Teachers can input the lesson title, text content, images, and even interactive media. The material creation process is flexible and easily adaptable to the basic competencies being taught.

Next, teachers can insert interactive activities such as:

Quiz is used to assess students' understanding of the material.



Figure 4. Interactive Features: Quiz and Collaborative Board

This image demonstrates how teachers can add interactive features such as quizzes and collaborative boards. The quiz feature is used to directly evaluate students' understanding, while the collaborative board enables students to simultaneously share responses, opinions, or ideas.

- Open-ended Question: to explore students' opinions and reflections.
- Collaborative Board: for group discussions and idea sharing.
- Interactive Video: from YouTube or user-uploaded content.



Figure 5. Embedding Interactive Videos from YouTube

Next, Nearpod also offers a feature to embed interactive videos. This image shows the process of a teacher adding a YouTube learning video relevant to the topic. Once the lesson is completed, teachers can share a session code or learning link with students. Lessons can be conducted in live sessions or student-paced modes, making it suitable for both face-to-face and distance learning environments.



Figure 6. Access Code or Learning Session Link

Finally, this image displays the access code or learning session link that can be shared with students. Teachers can choose between live sessions and student-paced learning, both of which offer high flexibility for in-person or online learning contexts.

Nearpod-based learning media introduces a new approach in education that emphasizes participation, interaction, and visualization. This is particularly important for students who are easily distracted by fast-paced digital content, as Nearpod provides an equally engaging learning experience comparable to social media but with an educational focus.

Brainrot and Its Impact on Education

Brainrot is a popular term referring to the decline in cognitive function, also described as “brain decay.” This condition is caused by excessive consumption of digital content, especially short and fast-paced content such as TikTok videos, Instagram Reels, and YouTube Shorts. Brainrot is characterized by symptoms such as difficulty maintaining focus, increased anxiety when not holding a phone, and dependency on instant content. This statement is supported by research conducted by (Dinesh & Subhashini, 2025) which found that excessive digital exposure and intensive social media use can cause attentional fragmentation and cognitive overload, especially in children and adolescents. The study further explains that social media algorithms that present fast and instant content condition the brain to prefer shallow information, weakening the ability to focus and triggering attention-related disorders. In the learning process, these symptoms manifest as a reduced ability of students to follow lessons fully, increased distractibility, and difficulty sustaining concentration for extended periods. This is supported by the findings of (Citra et al., 2025) which show that excessive gadget use in elementary school children decreases focus, increases distractions, and causes difficulty in attention control. Exposure to fast, bright, and noisy digital content significantly affects children's concentration capacity and can even lead to early symptoms of attention disorders.

This is reinforced by research from (Gao et al., 2025) which found that addiction to short videos correlates with impairments in the brain's cognitive and reward systems and causes changes in brain structure and function, particularly in the orbitofrontal cortex (OFC) and cerebellum, along with increased activity in the dorsolateral prefrontal cortex (DLPFC) and posterior cingulate cortex (PCC). These brain areas are closely related to attention, decision-making, and emotional regulation. Therefore, the brainrot phenomenon cannot be underestimated; it must be recognized as a real challenge in education that requires adaptive and innovative learning approaches.

Nearpod as a Solution to Address Brainrot

Nearpod is an interactive digital learning media platform that teachers can use to create more engaging, participatory, and responsive learning experiences tailored to students' needs in the digital era (Hidayah et al., 2025). By utilizing interactive features such as quizzes, polls, interactive videos, open-ended questions, and collaborative boards, teachers can present learning materials that are not only informative but also enjoyable and cognitively challenging. These features are designed to keep students' attention focused, making learning less monotonous and increasing their involvement.

The visually appealing and well-structured content presentation in Nearpod helps students maintain focus throughout the learning process. This statement is supported by an interview with a junior high school teacher identified as "R," who has used Nearpod in teaching. The teacher said, *"After using Nearpod during the learning process, it proved quite effective in reducing student distractions. The students became more focused because the material felt like a game, with quizzes and interactive videos. This definitely helped me as a teacher because the students were not just sitting quietly listening but were actively involved in answering questions and giving opinions. The class became livelier and the students didn't get bored quickly."*

This statement shows that using Nearpod directly in the classroom positively impacts students' concentration. The content, presented through images, videos, and interactive activities, makes students less likely to get bored and easier to understand the material. Thus, Nearpod functions not only as a presentation tool but also as a learning strategy that can redirect students' focus, which was previously distracted by instant digital content exposure.

4. Conclusion and Recommendations

The brainrot phenomenon, caused by rapid and repetitive consumption of short digital content, has had a tangible impact on the decline of students' learning focus, especially at the elementary and secondary education levels. Symptoms such as increased distractibility, difficulty concentrating, and dependence on digital devices show that this issue should not be considered ordinary behavior but rather a form of digital overstimulation affecting students' cognitive functions. Interview results and reviewed studies strengthen the understanding that students now face serious challenges in maintaining attention during learning processes.

To address these impacts, interactive digital learning media based on Nearpod can be an effective solution with features such as quizzes, videos, polls, and collaborative activities, Nearpod offers engaging, participatory, and focus-oriented learning. The varied and interactive presentation of materials encourages active student involvement and prevents boredom. Therefore, utilizing Nearpod in education is an innovative and responsive step toward addressing students' psychological challenges in today's digital era.

Further Study

Future studies and policy initiatives should build upon these findings to ensure that artificial intelligence is utilised ethically and efficiently for the benefit of society.

References

- [1] Angraeni, D. S., & Mintohari. (2024). Pengembangan Media Pembelajaran Multimedia Interaktif Berbasis Nearpod Untuk Meningkatkan Hasil Belajar Peserta Didik Pada Materi Struktur Bumi Kelas V Sekolah Dasar. *Elementary School Journal PGSD Fip Unesa*, 12(2), 188–198
- [2] Aribowo, Pandith, Bagaskara, Mahendra, & IHSan. (2025). Dampak Penggunaan Media Sosial " Brain Rot " terhadap Kesehatan Mental Remaja. *Jurnal Sosial Dan Teknologi*, 5(3), 350–357
- [3] Armini, N. N. S. (2024). Pelaksanaan pendidikan karakter di lingkungan sekolah sebagai upaya membentuk pondasi moral generasi penerus bangsa. *Metta: Jurnal Ilmu Multidisiplin*, 4(1), 113–125
- [4] Bandung, I. (2025). Dampak Media Sosial Tiktok terhadap Kemampuan Kognitif Anak Usia 5-6 Tahun. *Bandung Conference Series: Early Childhood Teacher Education*, 5(19), 17–24
- [5] Citra, A., Lestari, Khairani, Z., & Ikhrom. (2025). DAMPAK OVERSTIMULASI KONTEN DIGITAL TERHADAP PEMUSATAN PERHATIAN ANAK. *PAEDAGOGY : Jurnal Ilmu Pendidikan Dan Psikolog*, 5(1), 198–205. <https://doi.org/PAEDAGOGY : Jurnal Ilmu Pendidikan dan Psikolog>
- [6] Dinesh, D., & Subhashini, S. (2025). Influence of Psychological Well-Being and School Factors on Delinquency, During the Covid-19 Period Among Secondary School Students in Selected Schools in Nakuru County: Kenya. *INTERNATIONAL JOURNAL OF RESEARCH AND INNOVATION IN SOCIAL SCIENCE (IJRISS)*, IX(III), 134–154
- [7] Gao, Y., Hu, Y., Wang, J., Liu, C., Im, H., Jin, W., Zhu, W., Ge, W., Zhao, G., Yao, Q., Wang, P., Zhang, M., Niu, X., He, Q., & Wang, Q. (2025). Neuroanatomical and functional substrates of the short video addiction and its association with brain transcriptomic and cellular architecture. *NeuroImage*, 307(January). <https://doi.org/https://doi.org/10.1016/j.neuroimage.2025.121029>
- [8] Hidayah, K., Aziz, N., Sunarko, A., Sains, U., Qur, A.-, & Tengah, J. (2025). Implementasi Media Pembelajaran Berbasis Nearpod pada Hasil Belajar Al-Qur'an Hadits Siswa di MTsN 01 Wonosobo Tahun Pelajaran 2024/2025. *Reflection: Islamic Education Journal*, 2(1). <https://doi.org/https://doi.org/10.61132/reflection.v2i1.386>
- [9] Iga, C., & Camellia. (2024). Penerapan Nearpod sebagai Media Pembelajaran Interaktif untuk Meningkatkan Keterlibatan dan Motivasi Siswa. *Pedagogi: Jurnal Pendidikan Dan Pembelajaran*, 4(2), 90–94. <https://doi.org/https://doi.org/10.56393/pedagogi.v5i2.2486>
- [10] Lakilaki, E., Puri, R. M., Nuraufa, A., Saputra, Z., & Nur, A. (2025). The Phenomenological Analysis of the Impact of Digital Overstimulation on Attention Control in Elementary School Students: A Study on the ' Brain Rot ' Phenomenon in the Learning Process. *TOFEDU: The Future of Education Journal*, 4(1), 265–274. <https://doi.org/https://journal.tofedu.or.id/index.php/journal/index>
- [11] Maharani, P., Silvia, Madiun, U., & Pgri. (2024). Kelayakan Media Nearpod Berbasis Problem Based Learning Dalam Pembelajaran IPAS Kelas V Sekolah Dasar. *Prosiding Konferensi Ilmiah Dasar*, 5, 382–389. <https://doi.org/http://prosiding.unipma.ac.id/index.php/KID>
- [12] Millah, A. S., Apriyani, Arobiah, D., Febriani, E. S., & Ramdhani, E. (2023). Analisis Data dalam Penelitian Tindakan Kelas. *Jurnal Kreativitas Mahasiswa*, 1(2), 140–153. <https://doi.org/https://riset-iaid.net/index.php/jpm/article/view/1447>
- [13] Putra, M. H., & Nasution, A. P. (2024). Pemanfaatan Literasi Media Digital terhadap Siswa Sekolah Dasar dalam Pencegahan Fenomena Brain Rot. *AL MUNIR Jurnal Komunikasi Dan Penyiaran Islam*, 15(2), 155–165. <https://doi.org/https://ejournal.uinib.ac.id/jurnal/index.php/almunir/index>
- [14] Rabeka, P. A. (2024). Menelusuri Media Pembelajaran: Solusi Kreatif Untuk Pembelajaran Ipa Di Sekolah Dasar. *JURNAL MADINASIKA Manajemen Pendidikan Dan Keguruan*, 5(2), 48–57. <https://doi.org/10.31949/madinasika.v5i2.7689>
- [15] Saefullah, A. S. (2024). Ragam Penelitian Kualitatif Berbasis Kepustakaan Pada Studi Agama dan Keberagamaan dalam Islam. *Al-Tarbiyah : Jurnal Ilmu Pendidikan Islam*, 2(4), 195–211. <https://doi.org/10.59059/al-tarbiyah.v2i4.1428>
- [16] Sari, Y., Pusaka, J. S., Al-ashil, F., & Hidayatullah, R. (2025). Telaah Tugas dan Tanggung Jawab Guru di Era Society 5. 0. *Edukasi Elita: Jurnal Inovasi Pendidikan*, 2(3)
- [17] Yousef, A. M. F., Alshamy, A., Tlili, A., & Metwally, A. H. S. (2025). Demystifying the New Dilemma of Brain Rot in the Digital Era: A Review. *Brain Sciences*, 15(3). <https://doi.org/10.3390/brainsci15030283>