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The Visual Paradigm in Qur'ān Memorization: A Study of Color-Block Effectiveness in the General Community

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Abstract

This study investigates the effectiveness of color-block methods in *Qur'ān* memorization from the perspective of the general community. The research addresses the problem of maintaining long-term retention and reducing forgetfulness, particularly among diverse groups of memorizers with varied age, profession, and educational backgrounds. The main objective is to analyze how visual paradigms, specifically color-blocked *muṣḥaf* designs, influence memorization quality, focus, and motivation. A descriptive quantitative method was employed, utilizing observation, interviews, and questionnaires, with data analyzed using SPSS. Findings indicate that color blocks facilitate faster memorization, improve concentration, and enhance comfort during *tahfiz* sessions, with high acceptance among respondents. However, spatial recall benefits showed variability across individuals, suggesting the need for differentiated implementation strategies. The study concludes that the color-block method, especially the One Day One Color approach, represents an effective and innovative tool that can support broader tahfiz practices, while also offering practical implications for developing pedagogically sound and culturally responsive Qur'ānic learning curricula.

Keywords: Qur'ān memorization, color blocks, visual paradigm, tahfiz.

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Abstrak

Penelitian ini menelaah efektivitas metode blok warna dalam hafalan Al-Qur'an dari sudut pandang masyarakat penghafal. Masalah yang dikaji ialah bagaimana mempertahankan hafalan jangka panjang dan menurunkan kelupaan pada beragam latar usia, profesi, dan pendidikan. Tujuannya menganalisis bagaimana mushaf berblok warna memengaruhi kualitas hafalan, fokus, dan motivasi. Pendekatan yang digunakan adalah deskriptif kuantitatif melalui observasi, wawancara semi-terstruktur, dan kuesioner skala Likert; data dianalisis dengan SPSS. Hasil menunjukkan blok warna memudahkan pemanggilan, mempercepat proses hafalan, menata halaman padat, serta meningkatkan konsentrasi, dengan tingkat penerimaan dan rekomendasi yang tinggi. Manfaat pada daya ingat spasial bervariasi antarindividu, sehingga diperlukan pendampingan yang berbeda dan fase "lepas isyarat" singkat. Disimpulkan bahwa pendekatan One Day One Color praktis dan layak diadopsi luas untuk tahfiz, dengan implikasi pada standardisasi palet, pelatihan mentor, dan adopsi bertahap..

Kata kunci: Hafalan Al-Qur'an, blok warna, paradigma visual, tahfiz.

Introduction

Memorizing the Qur'an is a central practice within the Islamic tradition that involves not only spiritual commitment but also complex cognitive processes. The activity of Qur'anic memorization entails higher-order cognitive activities, including sustained attention, repetition, association, and long-term information retention, all of which require structured learning strategies to maintain memorization consistency. In contemporary contexts, these cognitive demands often intersect with practical challenges that affect the stability and durability of memorization, particularly among non-institutional memorizers.[1] In the current digital era, Qur'an memorizers face challenges in maintaining long-term retention and minimizing the level of forgetfulness of the verses they have memorized. Various methods have been explored to address this issue, including visual techniques and the use of colors, which are believed to enhance memory.[2]

Visual-based approaches, particularly color-based methods, have demonstrated potential in enhancing memory performance**.** From a cognitive psychology perspective, color functions as a visual cue that supports attention allocation, information categorization, and recall processes.[3] n learning contexts, color can strengthen encoding by increasing salience and by segmenting information into manageable units.[4] Applied to Qur'anic memorization, a color-

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1 Abdul Sattar Daulay and Safriadi Hasibuan, "Tahfidz Teachers' Strategies in Improving Quran Memorization," *Darul Ilmi: Jurnal Ilmu Kependidikan Dan Keislaman* 12, no. 1 (2024): 1–20, https://doi.org/10.24952/di.v12i1.11281.

2 Vinni Sabrina et al., "Eight Supporting Factors for Students Success in Quran Memorization," *Khalifa: Journal of Islamic Education* 6, no. 1 (2022): 73, https://doi.org/10.24036/kjie.v6i1.202.

3 Achmad Faqihuddin et al., "Multisensory Approach in Memorizing the Al-Quran for Early Childhood: Integration of the Tradition of Memorizing the Al-Quran with Digital Technology," *AL-ISHLAH: Jurnal Pendidikan* 16, no. 2 (2024): 1289–302, https://doi.org/10.35445/alishlah.v16i2.5326.

4 Muhammad Khafid Syaifulloh et al., "Electroencephalography (EEG) Frontal Alpha Asymmetry Index as an Indicator of Children's Emotions in the Three Quran Learning Methods: Visual, Auditory,

blocked mushaf may operate as a visual map that assists memorizers in organizing verses spatially and cognitively, thereby supporting recall during murājaʿah**.** The effectiveness of this approach requires further empirical investigation in order to obtain an objective understanding, particularly by involving Qur'an memorizers from the general community to assess its real impact and success.

This visual approach becomes especially relevant in the context of community Qur'an memorizers, who represent diverse age groups, professions, and educational backgrounds. Such diversity is often accompanied by varying cognitive preferences and learning constraints, including limited time, work-related fatigue, and inconsistent memorization routines. Several studies indicate that visual methods, such as color coding, can accelerate memorization and improve focus; however, their effectiveness may differ across individuals. These variations highlight the need to empirically examine how color-based visualization is perceived and utilized by the broader community in supporting consistent Qur'anic memorization.[5]

The main issue addressed in this study concerns how the community's paradigm toward visual approaches particularly the use of color blocks in the mushaf relates to the quality and consistency of Qur'anic memorization**.** In this context, paradigm refers to the community's perception, acceptance, and interpretive stance toward learning methods applied in the *tahfiz* process. Previous studies have indicated that memorization strategies and learner motivation play a crucial role in sustaining Qur'anic memorization practices within institutional and non-institutional settings.[6] In line with the growing adoption of visual learning strategies, color-based methods are increasingly perceived as tools that may enhance both memorization effectiveness and motivation. Therefore, examining this visual paradigm is essential to determine the extent to which the color-block method is accepted and produces tangible impacts in strengthening Qur'anic memorization within the community. Such an investigation not only provides insights into its practical applicability but also offers a basis for developing culturally responsive and pedagogically grounded approaches to support contemporary *tahfiz* practices.

The relevance of this issue has become increasingly significant with the emergence of color-block methods widely applied in various pesantren, *tahfiz* institutions, and even general community settings, such as the One Day One Color method in the Al-Hufaz mushaf developed by PT. Cordoba International

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and Memory," *Iranian Journal of Psychiatry*, ahead of print, December 20, 2022, https://doi.org/10.18502/ijps.v18i1.11417.

5 Wahyu Dewi Sahfitri et al., "Metode Pembelajaran Tahfiz Qur'an Dalam Menguatkan Hafalan Santri Di Pondok Pesantren Al-Ansor Manunggang Julu Kota Padangsidimpuan," *Wahana Didaktika : Jurnal Ilmu Kependidikan* 22, no. 1 (2023): 53–65, https://doi.org/10.31851/wahanadidaktika.v22i1.12924.

6 Muhammad Ayyinna Yusron Farouq, "STRATEGI DAN MOTIVASI MAHASISWA PENGHAFAL AL-QUR'AN DI PONDOK PESANTREN TAHFIZUL AL-QUR'AN NURUL FURQON MALANG," *Jurnal Studi Agama Dan Masyarakat* 19, no. 1 (2023): 68–77, https://doi.org/10.23971/jsam.v19i1.4564.

Indonesia. Although this method offers an innovative approach to supporting memorization, there remains a lack of empirical evidence demonstrating how society at large accepts and benefits from such an approach. In facing this challenge, it is crucial to obtain an integrative and comprehensive perspective, including an understanding of various aspects of daily life such as workload, social activities, and time constraints that may affect motivation and the effectiveness of memorization, as these contextual factors have been shown to significantly influence learners' engagement and persistence in non-formal and self-regulated learning environments.[7] An appropriate visual approach is therefore expected to serve as a supportive solution in the *tahfiz* learning process within the community, supported by findings that audio-visual media can influence memorization outcomes and learner engagement.[8]

There are research findings presented as part of the literature review, such as the study by Salsabila et al. entitled *"Exploration of the Uniqueness of Qur'an Memorizing Students with the Aid of Color per Line in the Syaamil Qur'an."* This study discusses the effectiveness of using the colored Syaamil Qur'an in supporting students' Qur'anic memorization strategies through a visual approach, as well as the challenges encountered and the solutions implemented in the tahfiz learning process.[9] The similarity between the two studies lies in their shared emphasis on the role of color-based visual media in supporting the Qur'anic memorization process. The difference, however, is that the present study focuses on the community's paradigm regarding the use of color blocks in the mushaf, whereas the previous study examined the strategies of tahfiz students in utilizing line-by-line color coding in the Syaamil Qur'an.

Furthermore, there is a study by Azizah entitled *"Implementation of the One Day One Colour Tahfidzul Qur'an Method in Improving Qur'anic Memorization of Students at SD Islam Pangeran Diponegoro Semarang in the Academic Year 2024/2025."* This research discusses the implementation and effectiveness of the One Day One Color method in enhancing students' Qur'anic memorization abilities at SD Islam Pangeran Diponegoro Semarang through a descriptive qualitative approach.[10] The similarity between the two studies lies in their shared exploration of the role of color as a supporting medium in the process of Qur'anic

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7 Ernesto Panadero et al., "Effects of Self-Assessment on Self-Regulated Learning and Self-Efficacy: Four Meta-Analyses," *Educational Research Review* 22 (November 2017): 74–98, https://doi.org/10.1016/j.edurev.2017.08.004.

8 Rahma Safitri Barus et al., "The Influence of the Use of Audio Visual Media and the Ability to Read the Qur'an on Tahfidz Learning Outcomes at Integrated Islamic Private Junior High School," *AL-ISHLAH: Jurnal Pendidikan* 14, no. 4 (2022): 5129–38, https://doi.org/10.35445/alishlah.v14i4.1128.

9 S Sofiyah and Budianto Budianto, "Eksplorasi Keunikan Siswa Penghafal Al Qur'an Dengan Bantuan Warna Per Baris Dalam Syamil Qur'an," *Ta'lif: Jurnal Pendidikan Dan Agama Islam* 1, no. 2 (n.d.): 104–17, https://purpendijournal.com/index.php/talif/article/view/40/12.

10 AN Risda, "Implementasi Metode Tahfidzul Qur'an One Day One Colour Dalam Meningkatkan Hafalan Al-Qur'an Peserta Didik Di SD Islam Pangeran Diponegoro Semarang Tahun Ajaran 2024/2025" (Tarbiyah, Universitas Islam Sultan Agung Semarang, 2025).

memorization, with a particular focus on improving memorization skills through a qualitative approach. The difference, however, is that the present study examines the community's paradigm regarding the use of color blocks in the mushaf, whereas Azizah's study concentrated more on the implementation of the One Day One Color method in structured learning among elementary school students.

This study aims to conduct an in-depth analysis of the community's paradigm regarding the role of color blocks in the process of Qur'anic memorization. It seeks to examine the extent to which color in the *mushaf* functions as an effective learning aid in accelerating and stabilizing memorization, as well as in fostering mental focus, inner comfort, and spiritual motivation among memorizers from diverse backgrounds. Without a comprehensive empirical understanding, the use of color-block visualization risks becoming a temporary visual trend rather than a pedagogically grounded support for *tahfiz* practice.

This study carries novelty in two main aspects: 1) the object of study, namely the general public of Qur'an memorizers from various age groups and professional backgrounds, which has rarely been the focus in studies on visual approaches to tahfiz. 2) the theoretical approach, specifically the application of the Color-Memory Association Theory in the context of using color blocks in the *mushaf* as an aid to Qur'anic memorization.

To date, most *tahfiz* research has concentrated on the effectiveness of methods in terms of memorization outcomes, while relatively few have examined the community's perspective (paradigm) on supporting media such as color from psychological and cognitive viewpoints. This study addresses that gap by highlighting how color blocks are understood and interpreted by society as part of a visual strategy in *tahfiz*.

Another novelty lies in the context of using a color-block mushaf, which represents a contemporary innovation yet has not been extensively studied scientifically. Colored mushafs have often been perceived merely as aesthetic or visual elements without being seriously linked to learning theories. This research underscores that the use of color in the mushaf is grounded in strong cognitive psychological foundations and can influence the quality of memorization, mental comfort, and spiritual tranquility during the memorization process.

By exploring the community's paradigm regarding color blocks, this study not only broadens academic insights into visual *tahfiz* studies but also opens opportunities for the development of mushafs that are more adaptive and responsive to the needs of memorizers across age groups. Moreover, the findings of this research have the potential to serve as a reference in the development of Qur'anic learning curricula in both formal and non-formal educational institutions, as well as to support the innovation of *tahfiz* media that are more modern, structured, and grounded in robust cognitive theory.

This study is field research conducted to gather empirical data directly from

Qur'anic memorizers across various *tahfiz* communities.[11] The study employed a descriptive quantitative approach aimed at measuring and delineating the community's paradigm regarding the use of color blocks in the *mushaf* as an aid to memorization. This approach was selected for its suitability in providing an objective portrayal of perceptions, visual comfort, and the effectiveness of color-based visualization in the *tahfiz* process, using numerical data subjected to statistical analysis.[12] Within the framework of the Color–Memory Association theory, color is regarded as a visual element capable of strengthening memory through visual association. Accordingly, a quantitative approach is a strategic choice for assessing the extent to which this method is accepted and perceived as beneficial by Qur'an memorizers in the community.

The population of this study comprises members of the general public who memorize the Qur'an and are actively engaged in *tahfiz* activities across a range of age groups, professions, and educational backgrounds, whether independently or through formal and informal institutions. Due to constraints of time, labor, and cost, the study employed a purposive sampling technique to select respondents who met specific criteria namely, individuals who had used a color-block mushaf for at least one month and were actively participating in the Qur'anic memorization process. Purposive sampling enabled the researchers to obtain data that are more relevant and representative of the study's objectives.[13]

Data were collected using three principal techniques. First, participant observation was conducted to directly examine the use of color-block mushafs in tahfiz activities. Second, semi-structured interviews were employed to elicit Qur'an memorizers' subjective views and experiences regarding the comfort and effectiveness of color visualization in supporting memorization. Third, a questionnaire was administered in the form of closed-ended items on a Likert scale to measure perceptions, visual comfort, motivation, and memorization consistency. The questionnaire instrument was constructed from indicators grounded in color-association theory and was validated through expert review prior to field deployment.

Data analysis was carried out with the assistance of the latest version of SPSS. The analytical stages included validity and reliability testing to ensure that the instrument met quantitative research standards. Subsequently, descriptive analyses were used to reveal data distributions and respondent characteristics, while inferential analyses were applied to examine relationships and trends among the variables under study. These analyses are expected to provide deeper insights into the extent to which color blocks in the *mushaf* can accelerate memorization, sustain consistency, and enhance visual comfort and spiritual motivation in the *tahfiz* process.

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11 M Arifin, *Buku Ajar Metodologi Penelitian Pendidikan* (Umsida Press, 2018).

12 S Hermawan and W Hariyanto, *Buku Ajar Metode Penelitian Bisnis (Kuantitatif Dan Kualitatif)* (Umsida Press, 2022).

13 S Saleh, *Analisis Data Kualitatif* (Pustaka Ramadhan, 2017).

Based on the problem formulation and the quantitative approach employed, the study proposed the following hypotheses: the null hypothesis (H_0) states that there is no significant effect of using color blocks in the mushaf on the quality of Qur'anic memorization among community memorizers meaning that color visualization does not produce a meaningful change in memory performance or memorization consistency. Conversely, the alternative hypothesis (H_1) posits that there is a significant effect of color-block usage on memorization quality, including improvements in speed, mental comfort, and spiritual motivation among memorizers.

Color–Memory Association

Grounded in the Color–Memory Association framework, color functions as a visual signal that supports memory across three core stages. At the encoding stage, color raises the salience of what is being learned and guides attention so that elements such as words, pause signs, or verse boundaries enter working memory more efficiently. At the ***storage*** stage, a consistent color scheme promotes grouping of meaning units into compact chunks, which are easier to retain in long-term memory. At the ***recall*** stage, learners do not rely solely on semantic content; they also use visual markers the combination of color, block, and position which adds alternate "routes" for retrieving what has been memorized. Experimental evidence generally shows that materials with appropriate, noticeable coloration yield better memory performance than monochrome presentations, supporting the educational value of thoughtfully applied color.[14]

In the context of a color-blocked *muṣḥaf*, the page operates as a visual map that supplies location anchors. Each color block ties a verse segment to particular coordinates on the page (for example, upper-left quadrant or near the right margin). With repeated practice, memorizers form stable associations between content and page location, so recalling does not depend only on word order but also on a recognizable "address" on the page. Drawing on principles of multimedia learning, the integration of semantic processing (meaning), visual cues (color or block), and spatial organization (position) can strengthen memory representations and support more stable recall across learning sessions. In this sense, color functions not merely as decoration but as a cognitive signal that directs attention and helps manage cognitive load during the memorization of extended textual material.[15]

To optimize these benefits, color design should follow several practical principles. (1) Consistency assigns one color to one function (e.g., a specific

[14] Jahangeer Khan and Chengyu Liu, "The Impact of Colors on Human Memory in Learning English Collocations: Evidence from South Asian Tertiary ESL Students," *Asian-Pacific Journal of Second and Foreign Language Education* 5, no. 1 (2020): 17, https://doi.org/10.1186/s40862-020-00098-8.

[15] Richard Mayer, *Multimedia Learning*, 3rd ed. (Cambridge University Press, 2020), https://doi.org/10.1017/9781316941355.

segment boundary or tajwīd theme) so learners build a stable internal schema. (2) Contrast and legibility ensure sufficient contrast with the muṣḥaf background (white/ivory) so Arabic script remains crisp. (3) Visual economy limits the number of color categories to avoid visual noise that would increase memory load. (4) Alignment with meaning draw block boundaries along meaning units or natural breathing phrases rather than splitting a clause, so grouping aligns with verse structure. (5) User calibration runs a brief pilot to capture preferences, comfort, and lighting conditions, ensuring the palette aids rather than hinders readability. With these principles, color becomes a functional memory aid not mere decoration by supporting attention, structure, and retrieval.[16]

It is important to note that the primary empirical evidence cited comes from language-learning contexts employing controlled experimental designs. These studies show that the use of color (e.g., colored paper) can heighten attention, strengthen encoding processes, and produce better recall performance than colorless conditions.[17] Specifically, color can act as a cue that reduces verbal interference when visual information must be recalled, thereby improving the efficiency of both encoding and retrieval. Moreover, research manipulating background color across different learning materials shows task-contingent effects for example, whether the target is memory for text or for images underscoring that color can either strengthen or attenuate memory depending on task demands and the properties of the material.[18] Accordingly, applying these principles to a color-blocked *muṣḥaf* is a reasonable mechanism transfer: the same general functions using color to highlight information, impose structure, and provide location markers are extended to a different medium and object. This framework nonetheless warrants caution in generalization: context, task characteristics, and learner attributes in *taḥfiẓ* may moderate the magnitude of effects, so findings from language-learning studies should be treated as a theoretical basis and potential indication rather than direct evidence.

The Effectiveness of Color Blocks in Qur'anic Memorization Practice

The findings provide a clear picture of respondents' perceptions of using color blocks in the Qur'anic *mushaf*, particularly in relation to facilitating memorization, accelerating the memorization process, and enhancing concentration. Data were analyzed using descriptive statistics based on a set of items capturing respondents' views of the One Day One Color method. Overall, the mean values for each indicator ranged from 3.94 to 4.47 on a 1–5 scale, indicating a general tendency to agree to strongly agree regarding the

16 Khan and Liu, "The Impact of Colors on Human Memory in Learning English Collocations."

17 Michelle Emily Lucic and Patricia R Talarczyk, "The Integration of Color and the Retention of Text," *Journal of Student Research* 7, no. 2 (2019), https://doi.org/10.47611/jsrhs.v7i2.473.

18 Ping Cai and Jun Wang, "The Effect of Background Colors of Learning Materials on Memory:Evidence from Chinese Characters," preprint, In Review, December 16, 2024, https://doi.org/10.21203/rs.3.rs-5266192/v1.

effectiveness of color in supporting Qur'anic memorization.

The study recorded a mean total score of 29.41 (out of a possible 18–35) with a standard deviation of 4.258, reflecting a high level of acceptance with relatively limited variation in responses. Most respondents considered the color-block method effective in supporting memorization in terms of ease, speed, improved focus, and social acceptance. Nevertheless, one aspect was comparatively weaker: the ability to recall the spatial position of verses based on color. This underscores that the benefits of visual methods are not uniform and may depend on individual learning styles.

These findings support the argument that innovation in *tahfiz* instruction should account for cognitive psychology—particularly dual coding and color-coding principles. The use of color can function as a simple yet impactful pedagogical strategy for improving learning effectiveness. Given the high level of acceptance among respondents, the One Day One Color method has strong potential for integration into *tahfiz* programs across various educational institutions. In addition, respondents' strong willingness to recommend the method suggests the likelihood of sustained diffusion of this innovation through peer recommendation.

No.	Items	N	Mean	SD	Min	Max
1	Color blocks in the mushaf help me more easily remember the verses I have memorized.	17	4.18	0.728	2	5
2	I memorize faster when verses are presented in color blocks compared to a regular mushaf.	17	4.18	0.883	2	5
3	Color blocks help me distinguish sections within a single mushaf page.	17	3.95	0.809	2	5
4	I can remember the position of verses based on specific color blocks.	17	4.18	1.088	2	5
5	I feel more focused when memorizing with the color-block method.	17	4.29	0.809	2	5
6	The color-block method should be widely implemented in tahfiz instruction.	17	4.47	0.849	2	5
7	I will recommend the One Day One Color method to my family and social circle.	17	4.47	0.717	3	5

Table 1. Descriptive Statistics

Here are the detailed results for each variable:

First, Perceived Ease of Memorization

Respondents indicated that the presence of color blocks in the *mushaf* facilitates remembering verses (mean = 4.18). This finding is consistent with Dual Coding Theory, which posits that information is more easily retained when processed through both verbal (text/recitation) and non-verbal (visual/color) channels, thereby strengthening memory traces and making them more accessible. In this context, color functions as a visual cue that highlights salient segments, making them easier to identify during *murājaʿah*.

Color blocks can also be understood as cognitive anchors that link the sound/recitation of a verse to its visual map on the page. This linkage reduces the effort required to locate a starting point when reviewing, shortens the time needed to reach the targeted passage, and, in turn, renders encoding more structured and recall faster. Reviews of the literature show that color can enhance memory performance (e.g., recall and recognition) by increasing attention and **salience**; findings in contemporary learning contexts likewise position color marking as a form of **signaling** that directs attention to relevant elements.[19]

This finding is also empirically supported by recent experimental evidence showing that color cues significantly improve learning performance by guiding visual attention and facilitating the processing of relevant information**.** In a controlled study on text-based learning materials, learners exposed to content-relevant color cues demonstrated higher recall accuracy and more efficient information processing than those learning without such cues. These results suggest that the facilitative effect of color observed in the present study reflects a broader cognitive mechanism in which visual signaling enhances memory accessibility and learning efficiency across different instructional contexts.[20]

Second, Acceleration of the Memorization Process

The statement that using color blocks enables participants to memorize more quickly also yielded a mean score of 4.18 (with slightly greater response variability: SD ≈ 0.883). This indicates that the majority experienced acceleration, although a small subset did not report comparable gains an expected pattern given individual differences in learning styles (visual vs. auditory/kinesthetic) and the need for an adaptation phase. From an instructional design perspective, color helps direct attention to essential elements, thereby making the processing of key information more efficient.

Mechanistically, this acceleration is likely supported by two processes: (a) chunking, namely grouping verses into smaller, meaningful units through color blocks, and (b) faster page orientation due to consistent visual cues. Both

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19 Mariam Adawiah Dzulkifli and Muhammad Faiz Mustafar, "The Influence of Colour on Memory Performance: A Review," *The Malaysian Journal of Medical Sciences: MJMS* 20, no. 2 (2013): 3–9.

20 Linwei She et al., "The Impact of Color Cues on the Learning Performance in Video Lectures," *Behavioral Sciences* 14, no. 7 (2024): 560, https://doi.org/10.3390/bs14070560.

processes reduce visual scanning and facilitate smoother transitions between sections. Recent evidence in text-based learning also shows that content-relevant background color can function as a retrieval cue provided the color–content mapping is meaningful and the design is not excessive thus strengthening recall without adding cognitive load. These observations align with the signaling principle in multimedia learning.[21]

This pattern of accelerated memorization is consistent with empirical findings indicating that visual signaling can significantly reduce processing time by minimizing unnecessary search and supporting more efficient information extraction. Experimental studies on instructional materials demonstrate that learners exposed to well-designed visual cues such as highlighting, signaling, or structural markers complete learning tasks more quickly and with lower cognitive effort than learners who study the same material without such cues. These findings suggest that the perceived acceleration reported by respondents in the present study reflects a broader efficiency effect of visual organization, rather than merely a subjective impression of faster learning.[22]

Third, Differentiating Sections within a Mushaf Page

The mean score of 4.18 indicates that respondents consistently view color blocks as a visual organizer that helps differentiate sections within a single page. Through color marking, dense content becomes more structured: memorizers can chunk verses into smaller, meaningful units, making the *murājaʿah* sequence more orderly, reducing intra-page confusion, and easing the internalization of memorized material.

From a theoretical–empirical standpoint, these findings align with the signaling principle and color-coding practices: highlighting relevant elements (including via color) directs attention, reduces search costs, and enhances retention/transfer. Recent meta-analyses and studies in contemporary learning environments including lectures and instructional videos also show that visual cues improve learning performance by guiding attention and organizing the presented material.[23]

Empirical studies further indicate that visual signaling not only enhances learning outcomes but also improves learners' ability to segment and structure complex information**.** Research on text and diagram-based instructional materials demonstrates that signaling cues such as color coding and visual markers support learners in identifying meaningful boundaries within dense

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21 Felicia Meusel et al., "The Influence of Content-Relevant Background Color as a Retrieval Cue on Learning with Multimedia," *Education and Information Technologies*, ahead of print, February 7, 2024, https://doi.org/10.1007/s10639-024-12460-1.

22 Patricia D. Mautone and Richard E. Mayer, "Signaling as a Cognitive Guide in Multimedia Learning.," *Journal of Educational Psychology* 93, no. 2 (2001): 377–89, https://doi.org/10.1037/0022-0663.93.2.377.

23 David Alpizar et al., "A Meta-Analysis of Signaling Principle in Multimedia Learning Environments," *Educational Technology Research and Development* 68, no. 5 (2020): 2095–119, https://doi.org/10.1007/s11423-020-09748-7.

content, thereby reducing intra-page disorientation and supporting more systematic recall. These findings suggest that the organizational function of color blocks observed in the present study reflects a general cognitive benefit of visual structuring, particularly when learners must manage high information density on a single page.[24]

Fourth, Remembering Verse Positions by Color

For the color-based positional memory indicator, a mean score of 3.94 with SD: 1.088 suggests greater individual variability than for other indicators. Some memorizers can consistently associate a verse's position with its color block, while others cannot likely reflect differences in spatial memory capacity and strategy preferences (visual cues vs. repetition/auditory emphasis). Accordingly, instructional support should be differentiated (e.g., practice without cues, use of a simple grid for page mapping, or reinforcement through recitation rhythm) to accommodate these disparities.

Findings in the prior literature underscore substantial inter-individual differences in both strategies and capacities for spatial memory differences that are sometimes mirrored in distinct patterns of neural network activity helping to explain heterogeneous responses on location-based tasks. Recent reviews of spatial navigation likewise highlight wide variation across individuals in spatial mapping and orientation, which is consistent with the mixed outcomes observed for color-anchored positional recall.[25]

Empirical research on spatial memory further indicates that visual cues do not uniformly benefit all learners, particularly for location-based recall tasks. Experimental studies have shown that while some individuals effectively utilize visual anchors to support positional memory, others rely more heavily on sequential or auditory rehearsal strategies, resulting in weaker or inconsistent spatial recall. These findings suggest that the lower mean score and higher variability observed in the present study should be interpreted not as a limitation of the color-block method itself, but as evidence of heterogeneous cognitive strategies in spatial encoding, thereby underscoring the need for differentiated instructional support.[26]

Fifth, Enhancement of Focus and Concentration

The mean score of 4.18 indicates that color blocks enhance focus during *tahfiz*. On text-dense pages, color functions as an attention grabber, enabling the eye to rapidly lock onto critical segments, reducing visual scanning time, and

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24 Erol Ozcelik et al., "An Eye-Tracking Study of How Color Coding Affects Multimedia Learning," *Computers & Education* 53, no. 2 (2009): 445–53, https://doi.org/10.1016/j.compedu.2009.03.002.

25 Nina Purg Suljič et al., "Individual Differences in Spatial Working Memory Strategies Differentially Reflected in the Engagement of Control and Default Brain Networks," *Cerebral Cortex* 34, no. 8 (2024): bhae350, https://doi.org/10.1093/cercor/bhae350.

26 Tamara Van Gog, "The Signaling (or Cueing) Principle in Multimedia Learning," in *The Cambridge Handbook of Multimedia Learning*, 3rd ed., ed. Richard E. Mayer and Logan Fiorella (Cambridge University Press, 2021), https://doi.org/10.1017/9781108894333.022.

stabilizing review sessions with sustained engagement.

These findings are consistent with recent research in multimedia learning: color cues/signaling redirect attention to essential information, reduce extraneous cognitive load, and improve learning performance. Evidence from lecture/video contexts and digital environments likewise shows that relevant visual cues facilitate essential processing without adding unnecessary load.[27]

Empirical studies on attention regulation further demonstrate that visual cues play a critical role in sustaining learners' focus, particularly when engaging with dense textual material**.** Experimental research indicates that color-based visual markers help maintain attentional stability by reducing visual search demands and preventing attentional drift during extended learning sessions. These findings suggest that the enhanced focus reported by respondents in the present study reflects a genuine attentional support function of color blocks, rather than a transient novelty effect, especially in contexts that require prolonged concentration such as *tahfiz* practice.[28]

Sixth, Support for Wider Implementation

The mean score of 4.29 on the "wider implementation" item indicates strong institutional acceptance: respondents consider the color-block method suitable for adoption in pesantren, tahfiz institutions, and community settings. This constitutes a positive signal for phased implementation (e.g., pilot classes, palette standardization, and mentor training).

From an adoption standpoint, research on the diffusion of educational/technology innovations over the past decade suggests that adoption intent is shaped by social norms, peer influence, and opinion leadership. When social readiness is high, the likelihood of successful implementation at the institutional level correspondingly increases.[29]

Research on the adoption of educational innovations and technology further supports this interpretation by showing that users' behavioral intentions to adopt new methods are strongly influenced by social norms, perceived usefulness, and facilitating conditions. Studies applying the extended technology acceptance model show that when a learning innovation is perceived as useful, socially supported, and supported by institutional structures, adoption is more likely to progress from individual experimentation to collective and sustained implementation. These findings suggest that the high acceptance scores observed

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27 Jennifer G. Cromley and Runzhi Chen, "A Meta-Analysis of Richard Mayer's Multimedia Learning Research: Searching for Boundary Conditions of Design Principles across Multiple Media Types," *Educational Research Review* 49 (November 2025): 100730, https://doi.org/10.1016/j.edurev.2025.100730.

28 Björn B. De Koning et al., "Towards a Framework for Attention Cueing in Instructional Animations: Guidelines for Research and Design," *Educational Psychology Review* 21, no. 2 (2009): 113–40, https://doi.org/10.1007/s10648-009-9098-7.

29 Sebastian Seebauer, "Why Early Adopters Engage in Interpersonal Diffusion of Technological Innovations: An Empirical Study on Electric Bicycles and Electric Scooters," *Transportation Research Part A: Policy and Practice* 78 (August 2015): 146–60, https://doi.org/10.1016/j.tra.2015.04.017.

in this study reflect not only individual preferences but also favorable social and organizational conditions for broader adoption of the color block method in tahfiz settings.[30]

Seventh, Willingness to Recommend

The highest-scoring item concerns respondents' willingness to recommend the One Day One Color (ODOC) method to family members and their immediate social circles, with a mean score of 4.47. This finding is notable, as it indicates strong enthusiasm for adopting the method. Personal recommendations constitute an important indicator of the diffusion of educational innovations, since interpersonal trust often exerts a greater influence than formal promotion. Accordingly, the color-block approach has the potential to diffuse organically through social recommendation mechanisms within tahfiz communities.

To ensure that this recommendation tendency translates into targeted and sustainable adoption, implementing institutions are advised to provide a concise implementation package comprising: (1) sample ODOC mushaf pages with a standardized color palette; (2) a color-based murājaʿah guide, including a weaning phase (color-free testing) to prevent cue dependency; (3) a simple evaluation rubric (e.g., recall latency, accuracy on similar verses, and consistency of submissions); and (4) brief demonstration/peer-modeling sessions during routine meetings. These practical steps help ensure that strong ODOC advocacy is converted into consistent, accountable instructional practice aligned with proper adab and tajwīd.

Recent empirical studies on the diffusion of educational innovations indicate that willingness to recommend is a strong predictor of sustained adoption, particularly in community-based learning environments. Research on social diffusion consistently shows that interpersonal recommendation especially among trusted peers has a greater influence on adoption decisions than formal institutional endorsement or promotional messaging. When an instructional method is actively recommended within close social networks, it is more likely to be internalized, adapted, and maintained over time. This suggests that the exceptionally high recommendation score observed in the present study reflects not only individual satisfaction but also a favorable social dynamic for the organic diffusion of the ODOC method within *tahfiz* communities.[31]

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30 University of Arkansas et al., "Unified Theory of Acceptance and Use of Technology: A Synthesis and the Road Ahead," *Journal of the Association for Information Systems* 17, no. 5 (2016): 328–76, https://doi.org/10.17705/1jais.00428.

31 Everett M. Rogers et al., "Diffusion of Innovations 1," in *An Integrated Approach to Communication Theory and Research*, 3rd ed., by Don W. Stacks et al., ed. Don W. Stacks et al. (Routledge, 2019), https://doi.org/10.4324/9780203710753-35.

Conclusion

Drawing on descriptive findings from the questionnaire and the Color–Memory Association framework, this study concludes that the use of color blocks in the *mushaf* particularly the One Day One Color (ODOC) approach is perceived by community Qur'an memorizers as effective in facilitating recall, accelerating memorization, and enhancing focus during *murājaʿah*. This is reflected in the consistently high indicator means (≈3.94–4.47) alongside strong scores for willingness to adopt widely and to recommend the method. Nevertheless, benefits related to spatial (position-based) memory vary across individuals, indicating the need for differentiated implementation strategies and a weaning phase (color-free testing) to ensure long-term retention that is not dependent on visual cues. Practical implications include standardizing a consistent color palette across pages/juz, training mentors to guide visual chunking, and phasing in adoption within *tahfiz* institutions and community settings. The principal limitations of this study are its reliance on self-reports and a descriptive design; therefore, future research should employ experimental and longitudinal methods with objective measures (e.g., recall latency, accuracy on similar verses, and color-independent performance)—to estimate causal effect sizes and the durability of retention.

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