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by Caroline Caroline

The Influence of Minimalist Design Elements on Visual Preferences of Generation Z: A Quantitative Study

Abstract

Minimalist design has become a dominant trend across various visual media, from digital advertising to mobile applications. Generation Z, as digital natives with high exposure to visual content, exhibits unique preferences toward minimalist design. However, limited research has focused on identifying which elements of minimalist design most influence their visual preferences. This study aims to analyze the impact of critical minimalist design elements—white space, straightforward typography, neutral colors, and layout—on the visual preferences of Generation Z. A quantitative approach was adopted using a survey-based methodology. The study involved 200 respondents from Generation Z in Indonesia, selected through purposive sampling. The research instrument was a questionnaire employing a 5-point Likert scale to measure preferences for each minimalist design element. The collected data were analyzed using descriptive statistics and regression analysis to identify the most influential elements. The findings reveal that white space is the most influential element for Generation Z, with an average score of 4.3 and a regression coefficient of 0.45 (p < 0.01). Neutral colors and straightforward typography also show significant impacts, with coefficients of 0.32 (p < 0.05) and 0.28 (p < 0.05), respectively. Conversely, layout demonstrated the least influence, with a coefficient of 0.15 (p > 0.05). These results confirm that Generation Z favors clean, simple, focused designs that effectively use white space and calming color palettes. This study contributes to the graphic design literature by offering insights into the visual preferences of Generation Z. Practically, the findings provide actionable guidelines for graphic designers to create more effective digital campaigns targeting young audiences. Future research is recommended to explore cross-cultural variations in visual preferences and the role of specific media platforms in shaping these preferences.

Keywords: Minimalist Design, Generation Z, Visual Preferences, White Space, Graphic Design, Digital Campaigns

INTRODUCTION

The minimalist design trend has emerged as a dominant approach in modern graphic design, influencing various aspects such as products, branding, and digital media. This design trend is characterized by its emphasis on simplicity, organized layouts, and the functional use of visual elements. According to a study by (Ferreira et al., 2023), minimalist design provides a more focused visual experience, enabling audiences to understand the intended message better.

Generation Z, often called digital natives, has emerged as a pivotal demographic in shaping contemporary design trends. Born between 1995 and 2010, this generation has grown up in a world dominated by digital technology, which has profoundly influenced their consumption patterns and aesthetic preferences. As active participants in the digital economy, Generation Z accounts for a growing share of global consumer spending, making them a key audience for industries ranging from advertising and e-commerce to education and entertainment. Their unique

ability to interact seamlessly with digital platforms positions them as cultural trendsetters, driving visual communication and design innovations.

Unlike previous generations, Generation Z prioritizes speed, simplicity, and emotional engagement in visual content. Their constant exposure to high-volume digital media has cultivated a preference for clean, straightforward, and immediately impactful designs. Minimalist design, characterized by principles such as white space, neutral colors, and straightforward typography, aligns closely with these preferences. However, while minimalist design continues to dominate visual media, limited research has focused on how its specific elements resonate with Generation Z. This phenomenon has become increasingly relevant with advancements in technology and digitalization, allowing audiences to consume large amounts of visual content rapidly. Within this context, Generation Z, as digital natives, exhibits unique preferences for visual content encountered on social media, applications, and websites.

Generation Z, possesses distinct characteristics that set them apart from previous generations. They have grown up in a digital era where visuals serve as a primary communication medium. A study by (Stylos & Vassiliadis, 2023) revealed that Generation Z tends to favor simple yet visually impactful designs. However, their specific preferences regarding minimalist design elements remain underexplored. This gap highlights the need for research to examine how minimalist design trends resonate with Generation Z in the context of digital content consumption. Although minimalist design has been widely discussed in previous studies, most research focuses on technical aspects or its impact on marketing. For instance, a study by (Abu-Obeid & Abuhassan, 2024; Enwin et al., 2023; Hou et al., 2024) emphasized how using neutral colors and white space in design can enhance audience engagement. However, studies addressing Generation Z's visual preferences for minimalist design elements are still scarce. This gap is significant, given Generation Z's substantial influence on contemporary design trends, particularly in digital media.

This study aims to analyze the influence of minimalist design elements on Generation Z's visual preferences. The primary focus is to identify specific elements such as layout, typography, color, and contrast that most significantly affect their visual appeal. By employing a quantitative approach, this research seeks to provide measurable insights that can be directly applied to modern graphic design. The contribution of this study lies in two main aspects. First, it offers empirical insights into Generation Z's visual preferences, serving as a reference for graphic designers in creating more effective digital campaigns. Second, the findings are relevant for creative industry practitioners leveraging minimalist design elements to enhance engagement on digital platforms. These findings align with previous studies that suggest audience-oriented designs are more successful in capturing attention and fostering emotional connections with users (Ferreira et al., 2023). In summary, this study contributes to the academic literature on graphic design and provides practical guidelines for the creative industry. Understanding Generation Z's visual preferences for minimalist design trends is expected to improve the effectiveness of design strategies in various contexts, from marketing to education. Additionally, the findings can serve as a foundation for future research to explore evolving design trends for subsequent generations.

LITERATURE REVIEW

    A. Minimalist Design

Minimalist design is an aesthetic approach in graphic design that emphasizes simplifying visual elements while maintaining functionality. This approach has become a leading trend across various visual platforms, from website design to digital advertising. One of the critical principles of minimalist design is white space, which refers to the space surrounding visual elements. White space provides visual balance, tidying the design and enabling the audience to focus on the main elements (Nawar et al., 2024). Proper use of white space often creates a more elegant and sophisticated visual effect. In addition to white space, minimalist design highlights the principle of color contrast, which allows critical elements to stand out. Simple color combinations, such as black and white or monochromatic palettes, are often used to create comfortable visual harmony for the audience's eyes (Ferreira et al., 2023). Proper color contrast enhances aesthetic appeal and facilitates visual navigation, especially in user interface (UI) design. In minimalist design, colors are often employed as non-verbal communication tools to convey emotions or specific messages subtly.

Straightforward typography is another principle supporting minimalist design, which typically uses clean and modern sans-serif fonts. Typography is a crucial element in establishing informational hierarchy within a design. For instance, bold and larger fonts are used for titles, while smaller font sizes are used for detailed information (Candau & Belloy, 2024; Punsongserm & Suvakunta, 2024). This combination not only improves readability but also creates a professional impression. An intuitive layout is also a crucial component of minimalist design. A well-structured layout logically guides the audience through visual elements, effectively conveying the message. The application of minimalist design extends beyond digital media to physical product design, branding, and advertising. This trend is gaining popularity due to its ability to deliver a visual experience that is aesthetically pleasing and functionally efficient. With the increasing consumption of visual content, minimalist design is considered an ideal solution for conveying messages clearly without distracting the audience with unnecessary elements.

B. Generation Z and Visual Preferences

Generation Z represents the cohort born in the digital era, growing up with constant access to technology and social media. This generation holds high expectations for the quality of visual content they consume daily (Tirocchi, 2024). Unlike previous generations, Generation Z prioritizes speed and simplicity in understanding visual content. Research by (Mandić et al., 2024) indicates that this generation is drawn to clean, simple, emotionally engaging designs. This underscores the vital role of visual aesthetics in enhancing the appeal of content for Generation Z. As digital natives, Generation Z is highly familiar with social media platforms such as Instagram, TikTok, and Pinterest, where visuals are the primary means of capturing attention. Their preference for simple design is often shaped by their exposure to rapidly changing and repetitive visual content. (Arie Bowo et al., 2024) found that Generation Z tends to favor designs that convey messages directly without distractions from irrelevant elements. This preference explains this generation's widespread popularity of minimalist design, characterized by elements such as white space and straightforward typography.

Additionally, Generation Z exhibits a heightened sensitivity to dynamic aesthetic trends. They tend to appreciate designs that incorporate elements of pop culture, soft color palettes, and visuals that emphasize inclusivity (Tang, 2023). In the context of digital media, these preferences translate into content that is easily accessible and understandable via mobile devices. This makes

Generation Z one of the most challenging yet intriguing audiences to study in graphic design. The uniqueness of Generation Z lies in their ability to selectively and quickly consume visual content. They tend to avoid overly complex or information-dense designs, instead favoring clean visuals with well-organized elements. With this understanding, it becomes evident that a deeper exploration of how Generation Z responds to minimalist design elements is essential for comprehensively understanding their visual preferences

C. Related Work

Previous studies have examined minimalist design trends and their impact in different contexts. (Abu-Obeid & Abuhassan, 2024; Enwin et al., 2023; Hou et al., 2024) found that designs incorporating white space and simple elements enhance audience appeal, particularly in digital advertising. Their study also revealed that intuitive layouts can increase user engagement by up to 30%. Similarly, research by (Pelet, 2010; Wasilewski, 2024) highlighted how the combination of neutral colors and minimalist elements contributes to the visual appeal of e-commerce websites, ultimately improving conversion rates. However, much-existing research focuses on the technical applications or marketing effectiveness of minimalist design, often neglecting the cultural and generational nuances that influence audience perceptions. For example, (Abu-Obeid & Abuhassan, 2024; Enwin et al., 2023; Hou et al., 2024) emphasized the role of white space in enhancing engagement but did not explore how such design choices resonate with specific generational cohorts. Similarly, (Li et al., 2024; Pelet, 2010; Wasilewski, 2024) discussed the functional benefits of minimalist design in e-commerce but did not examine the potential cultural or generational differences in visual appeal.

This lack of focus on cultural and generational nuances presents a significant gap. For instance, (Bai et al., 2024; Chen et al., 2024) explored typography's role in poster design but did not consider generational preferences in font choices. Likewise, (Al-Gerafi et al., 2024) investigated minimalist design in e-learning platforms but overlooked variations in generational engagement. These omissions underscore the need to understand how Generation Z—distinct in their media habits and aesthetic preferences—responds to minimalist design. Generation Z's exposure to digital media has cultivated preferences for simple, impactful designs. Platforms like Instagram and TikTok have shaped their appreciation for clean layouts and emotionally engaging visuals, making exploring their interaction with minimalist design elements essential. Furthermore, understanding the local reception of global minimalist trends is critical in culturally diverse contexts like Indonesia, where social media influences aesthetics significantly. This study aims to bridge these gaps by focusing on Generation Z's preferences, offering theoretical and practical insights into minimalist design's cultural and generational relevance. By addressing these oversights, the research seeks to provide a more nuanced perspective on how minimalist design can align with Generation Z's unique visual sensibilities

However, there is a notable scarcity of research addressing Generation Z's visual preferences for minimalist design. (Bai et al., 2024) investigated the use of typography in digital poster designs targeted at younger audiences but did not explicitly explore the broader elements of minimalist design. Meanwhile, (Al-Gerafi et al., 2024) examined minimalist design in the context of e-learning but did not focus on the preferences of any specific generation. This gap presents an opportunity for more in-depth research, particularly in understanding how Generation Z responds to elements such as white space, typography, and color in digital media. This literature review

underscores the need to bridge the gap between minimalist design trends and Generation Z's visual preferences. This research aims to provide new, relevant insights for academics and practitioners in graphic design by synthesizing insights from previous studies and focusing specifically on Generation Z.

METHODS

A. Design Research

This study employs a quantitative approach to explore the influence of minimalist design elements on Generation Z's visual preferences. A survey-based questionnaire method was used to collect data from respondents, enabling researchers to obtain measurable information that could be statistically analyzed. This approach was chosen as it is well-suited for systematically identifying relationships between independent variables (minimalist design elements) and the dependent variable (visual preferences).

B. Population and Sample

The study population consists of Generation Z individuals in Indonesia, aged 16 to 25, who were chosen because they represent a digitally immersed demographic with substantial interactions with visual content. A purposive sampling technique was used to meet the research objectives, selecting respondents based on criteria such as active use of digital media and familiarity with minimalist visual design. 200 respondents were chosen for the sample size, ensuring adequate representation of Generation Z in Indonesia. This sample size was determined based on statistical considerations, providing sufficient power for the analyses conducted in this study. According to guidelines for regression analysis, a minimum of 10–15 observations per predictor variable is required to achieve reliable estimates. With four independent variables (white space, typography, color, and layout), the sample size 200 exceeds these requirements, ensuring robust statistical analysis.

Moreover, this sample size enables meaningful subgroup analyses, such as examining potential differences in preferences based on gender or educational background. While the findings are specific to Indonesia, the chosen sample is diverse enough to capture variations within the Generation Z demographic, enhancing the study's generalizability. The purposive sampling method ensures that respondents meet specific criteria relevant to the research objectives, reducing noise in the data and increasing the reliability of the results. By targeting individuals who actively engage with digital media, the study captures insights from those most likely to interact with minimalist design in their daily lives, further strengthening the relevance of the findings

C. Research Instrument

The instrument used in this study was a questionnaire developed based on a 5-point Likert scale, where a score of 1 indicated very low preference and a score of 5 indicated very high preference for minimalist design elements. The questionnaire was divided into several sections, each measuring responses to the following design elements:

1. Color – Respondents were asked to evaluate simple color palettes, including neutral tones and contrasting color combinations.
2. Typography – Assessment of preferences for simple and easy-to-read sans-serif fonts.
3. White Space – Evaluation of the aesthetic impression of empty spaces within the design.
4. Layout – Assessment of the organization and intuitiveness of visual layout design.

The instrument was tested for validity and reliability through a pilot study involving 30 respondents before broader implementation. This process ensured that each question in the questionnaire accurately measured visual preferences.

D. Data Analysis Techniques

The data collected from the questionnaires were analyzed using statistical methods. Descriptive statistical analysis was conducted to describe the characteristics of the respondents and their preferences for each minimalist design element. Subsequently, regression analysis was performed to identify the influence of minimalist design elements on overall visual preferences. The regression analysis examined significant relationships between the independent variables (color, typography, white space, and layout) and the dependent (visual preferences) variables. Data analysis was done using statistical software such as SPSS or similar tools to ensure accurate and reliable results.

RESULTS

A. Descriptive Statistic

The distribution of respondents by age, gender, and educational background is presented in Table 1. Most respondents fall within the 18–22 age group (60%), representing the dominant segment of Generation Z in this study. Regarding gender, the number of female respondents slightly exceeds that of males, accounting for 55% and 45%, respectively. Regarding educational background, university students form the largest group (40%), followed by high school graduates (35%) and high school students (25%).

Table 1. The distribution of respondents based on age, gender, and educational background

Characteristics	Total Respondent	Percentage (%)
Age		
16-17 years old	20	10%
18-22 years old	120	60%
25 years old	60	30%
Sex		
Male	90	45%
Female	110	55%
Education		
Senior High School	50	25%
Graduated Student	70	35%
Undergraduate Student	80	40%

The average preference scores for minimalist design elements revealed exciting results. The white space element received the highest score, with an average of 4.3 on the Likert scale, indicating a high preference level. The simple typography element also achieved a relatively high score of 4.0,

reflecting that Generation Z appreciates clean and easy-to-read fonts. Meanwhile, the neutral color element scored an average of 3.8, slightly higher than vivid colors, which only scored an average of 3.4. The element with the lowest score was layout, with an average of 3.2, indicating a lower preference for layout than the other elements.

The respondent distribution, outlined in Table 1, revealed distinct demographic patterns. Further analysis examined preferences by gender and educational background to identify potential subgroup differences. Female respondents exhibited a slightly higher preference for typography (average score: 4.2) than male respondents (average score: 3.8), suggesting that females might prioritize font clarity and readability more than males. Similarly, university students scored higher in their preference for white space (average score: 4.5) than high school students (average score: 4.1), indicating a stronger appreciation for clean and professional aesthetics among more educated respondents.
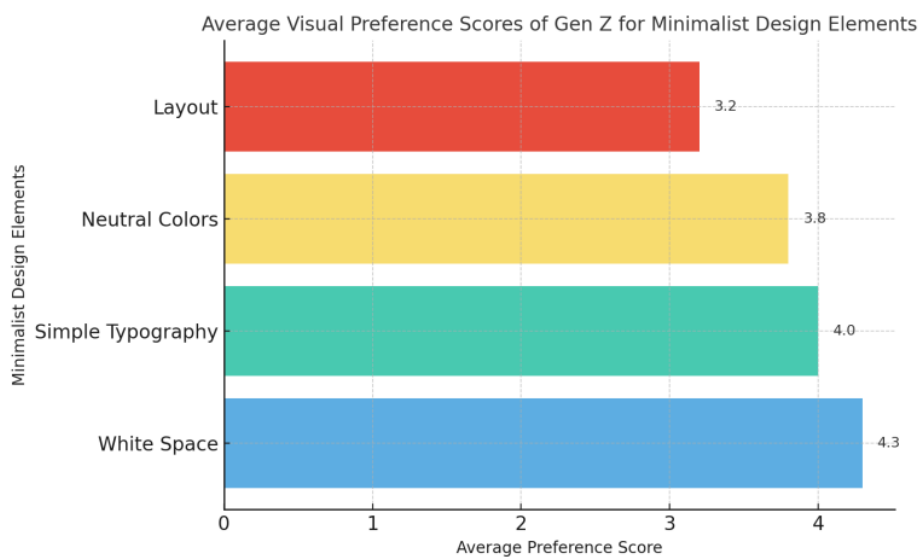

Figure 1. Average Visual Preference Scores of Generation Z for Minimalist Design Elements.

B. *Inferential Analysis: Regression and Interaction Effects*

Regression analysis results indicate that the white space element significantly impacts Generation Z's visual preferences, with a coefficient value of 0.45 ($p < 0.01$). This finding demonstrates that the effective use of space in visual design plays a crucial role in shaping Generation Z's aesthetic perception. The neutral color element has a coefficient value of 0.32 ($p < 0.05$), indicating a preference for calm and non-vivid colors.

Table 3: Regression Results for the Impact of Minimalist Design Elements on Visual Preferences

Elemen	Koefisien Regresi (β)	Signifikansi (p-value)

White Space	0.45	p<0.01
Neutral Colors	0.32	p<0.05
Typography	0.28	p<0.05
Layout	0.15	p>0.05

The white space element contributes the most to visual preferences, indicating the importance of space in creating appealing aesthetics. The neutral color and simple typography elements also significantly impact, although not as strong as white space. In contrast, the layout element has a statistically insignificant influence (p > 0.05), suggesting that while it is essential, layout is less of a primary factor in Generation Z's visual preferences. Figure 2 shows minimalist design elements' influence on visual preferences, and Figure 3 shows subgroup preferences for minimalist design elements, with comparative scores across gender and educational levels.

Table 4: Regression Results with Interaction Effects

Predictor	Coefficient (β)	Gender Interaction (Female)	Gender Interaction (Male)	Education Interaction (University)	Education Interaction (High School)
White Space	0.45***	0.54***	0.38**	0.45***	0.44**
Neutral Colors	0.32**	0.30**	0.29**	0.33**	0.30**
Typography	0.28**	0.29**	0.26**	0.35**	0.25**
Layout	0.15	0.14	0.13	0.15	0.14

*Significance levels: ***p < 0.01; **p < 0.05; *p < 0.1.*

To explore interaction effects, additional regression models were conducted, incorporating gender and educational background as moderating variables:

- Gender Interaction: The impact of white space on visual preferences was more substantial among females (β = 0.52, p < 0.01) compared to males (β = 0.38, p < 0.05). This finding suggests that females place greater emphasis on spatial clarity in design.
- Educational Background Interaction: Respondents with university-level education demonstrated a higher sensitivity to typography (β = 0.35, p < 0.05) compared to those with only high school education (β = 0.25, p < 0.05). This indicates that educational background may influence preferences for font simplicity and readability.
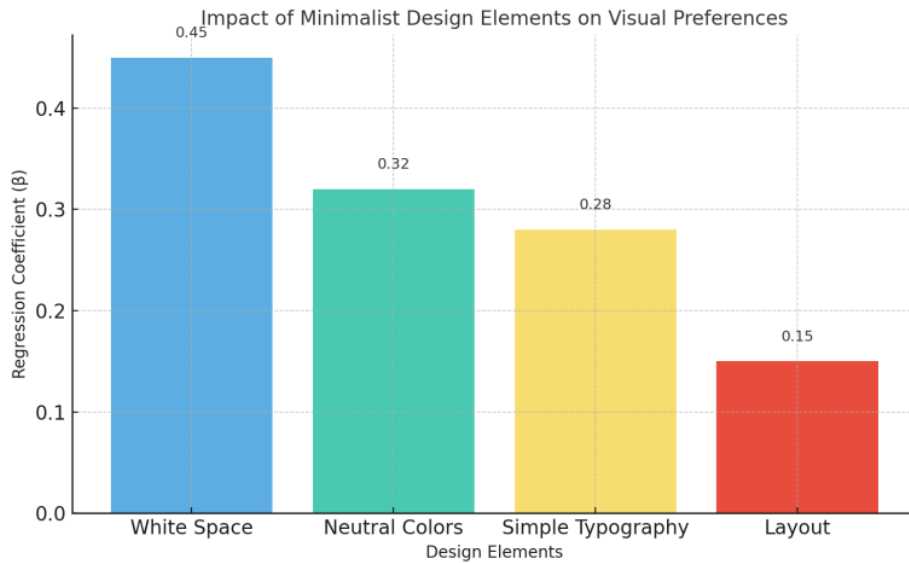
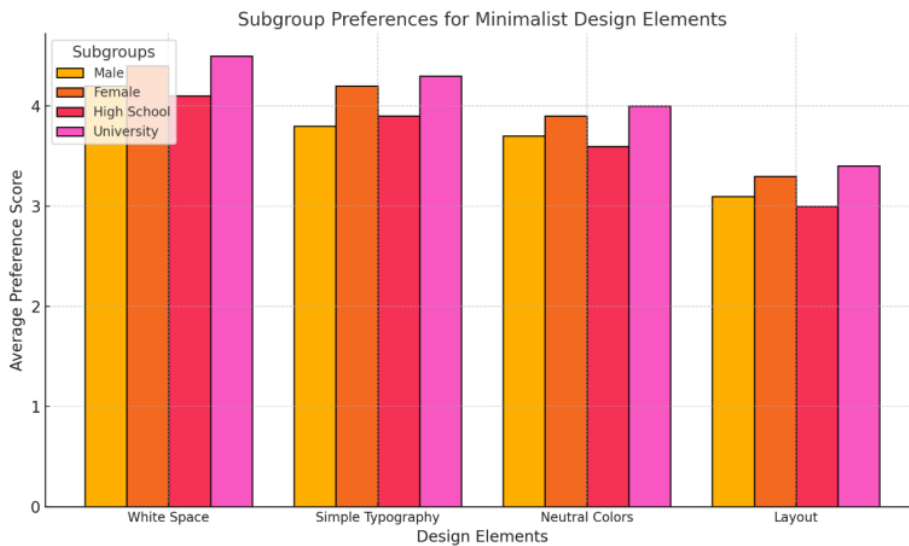Figure 2: The Influence of Minimalist Design Elements on Visual Preferences

Figure 3: Subgroup Preferences for Minimalist Design Elements

DISCUSSION

[12] The findings of this study indicate that the white space element has the most significant influence on Generation Z's visual preferences, with the highest average score and a significant regression coefficient. This aligns with previous research by (Nawar et al., 2024), highlighting that white

space creates visual focus and conveys an elegant impression. Generation Z, as digital natives, greatly value clean and structured designs that enable them to process information without distractions from irrelevant visual elements quickly. In addition to white space, neutral colors, and straightforward typography significantly impacted visual preferences. Neutral colors are more appealing as they provide a calming and professional impression, as stated in (Ferreira et al., 2023) study. Straightforward typography, particularly sans-serif fonts, is well-received due to its high readability. These findings reinforce the study by (Mandić et al., 2024), which noted that simple fonts often enhance the efficiency of visual communication.

However, while still relevant, the layout element had the slightest influence on Generation Z's visual preferences in this study. This contrasts with the findings of (Li et al., 2024), emphasizing that layout is critical in creating intuitive visual navigation. This discrepancy may be due to the design context used in this study, which focuses more on aesthetics rather than navigational functionality. The implications of this study are particularly valuable for the graphic design industry, especially in creating digital campaigns targeting Generation Z. Graphic designers can leverage these findings to develop more engaging designs for younger audiences by emphasizing effective use of white space, straightforward typography, and neutral color palettes. Additionally, these results provide relevant insights for app developers, web designers, and content creators aiming to enhance audience engagement. The unique visual preferences of Generation Z also reflect a paradigm shift in graphic design toward simplicity and efficiency. This study offers significant contributions to understanding the dynamics of young generations' preferences for minimalist design, which continues to be a leading trend in the digital era.

Limitation

This study, while comprehensive, has several limitations. Firstly, the survey relied on self-reported data, which may introduce bias. Respondents' familiarity with minimalist design principles may vary, potentially influencing their ability to assess their preferences accurately. For instance, individuals with less exposure to design concepts might interpret minimalist elements differently, impacting the validity of their responses. Secondly, the study exclusively focused on Generation Z in Indonesia. While this provides valuable insights into a culturally specific context, the findings may not be directly generalizable to Generation Z in other countries or regions. Cultural differences in design appreciation mean that preferences identified in this study may not hold universally. Another limitation is the exclusion of other age groups for comparative analysis. Including Millennials or Generation X could provide a broader perspective on how preferences for minimalist design vary across generations. Lastly, the study did not explore the impact of platform-specific preferences, such as those influenced by Instagram versus TikTok, which could further refine the understanding of design trends among Generation Z.

CONCLUSION

This study demonstrates that minimalist design significantly appeals to Generation Z, mainly through white space, neutral colors, and straightforward typography. While layout was found to have a lesser impact, the collective influence of these elements underscores their importance in creating designs that resonate with young audiences. The findings provide actionable insights for graphic designers and creative professionals seeking to engage Generation Z effectively. Beyond digital campaigns, the applications of minimalist design extend to education, health

communication, and user interface design. For instance, e-learning platforms can leverage minimalist principles to enhance clarity and user engagement. Health campaigns can use clean and simple visuals to disseminate information more effectively, particularly in contexts requiring quick comprehension. Similarly, app developers can design interfaces prioritizing usability and aesthetic appeal, making applications more accessible and enjoyable for diverse users. Future research should explore cross-cultural differences in minimalist design preferences and investigate how these elements perform across various media platforms. Additionally, comparative studies involving other generational cohorts could provide deeper insights into the evolving nature of design preferences. By broadening the scope of this research, designers can better tailor their strategies to meet the needs of an increasingly global and diverse audience.

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