BLAŽ BAROMIĆ



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Introduction

Graphic design is more than just an aesthetic practice; it plays a crucial role in how information is communicated visually. This paper examines the psychological, cognitive, and physiological effects of design elements such as color, typography, and composition on audiences. Drawing from cognitive science, visual perception theory, and studies on user interaction, this paper aims to demonstrate how graphic design influences decision–making, emotional response, and comprehension. Through an interdisciplinary approach, it highlights the scientific principles that underpin effective design practices, providing insights for designers to create more impactful and user–friendly visuals.

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Methods and Materials

The first step in understanding the effectiveness of graphic design lies in cognitive psychology—the study of mental processes involved in perception, memory, and problem-solving. Graphic designers rely on principles of human perception to ensure their creations are understood and processed efficiently by their audience. When we view a design, our brains automatically process various visual stimuli. Elements such as color, contrast, and layout are crucial in guiding our attention and helping us make sense of the visual world. Cognitive theories, such as the Gestalt Principles of Perception, explain how the human brain organizes visual stimuli into meaningful patterns. For example, the principle of proximity suggests that elements placed close to one another.



Figure 1 Plus Jakarta Sans Semibold, 17pt

Results and Discussion

One of the most influential aspects of graphic design is color. Colors are not just decorative elements; they can evoke specific psychological responses and influence emotions. For instance, warm colors like red and yellow can increase feelings of urgency or excitement, while cooler tones like blue and green tend to evoke calmness and trust. In branding, colors are carefully chosen to convey specific meanings and create emotional connections with the audience. Research has shown that color can enhance brand recognition and influence purchasing decisions, making it an essential component of effective visual communication.

Table 11 Plus Jakarta Sans Semibold, 17pt

Aspect	Physics	Chemistry	Biology
Mike	80	55	75
Haynes	70	65	40
Hina	70	52	63
Johny	55	53	42

Conclusion

Graphic design is a multifaceted discipline that goes far beyond decoration; it is a science that is deeply rooted in our understanding of how humans perceive, process, and respond to visual information. By incorporating principles from cognitive psychology, color theory, and user behavior, graphic designers can create more effective, engaging, and impactful designs. As technology advances and new tools emerge, the role of scientific research in shaping design will continue to grow, making the intersection of design and science an exciting area for exploration and innovation.

References

[1] JPlus akarta Sans, 12pt

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Acknowledgements

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