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Identifying Interdisciplinarity in Visual Communication Design Practices in the New Media Era

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Abstract
Visual Communication Design (VCD) science has developed in an interdisciplinary space in the new media era. This paper aims to pose VCD regarding interdisciplinarity and identify its theoretical complexity by exploring the scientific characteristics within its theoretical and practical realms. Interdisciplinarity plays a critical role in shaping and responding to the reality of the new media era. VCD in artificial intelligence is shaped by the interactions among Habitus, Capital, and Field, as outlined in Bourdieu's Theory of Practice. By reviewing and synthesising the literature, this paper offers a conceptual framework in an interdisciplinary manner.

Keywords: Design; Interdisciplinarity; New Media; Visual Communication

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1.0 Introduction

The rapid evolution of technology, particularly the advent of big data and artificial intelligence, has profoundly reshaped the landscape of visual communication design, ushering in an era characterized by enhanced digitisation and intelligent methodologies (Zhang, 2025). In recent years, Visual Communication Design (VCD) has increasingly functioned as an interdisciplinary domain, intersecting with media studies, cultural sociology, artificial intelligence, psychology, and communication studies, particularly in response to the complexity of digital and algorithm-driven environments. Originally, VCD was rooted in traditional visual practices for conveying messages, e.g., illustration, typography, and photography. In line with the social changes and the acceleration of technology innovation, this discipline has grown into an aesthetic domain and a complex interdisciplinary space combining art, technology, social science, and marketing (Hapsari, 2025). Today, VCD practices have undergone significant transformation to keep pace with technological, industrial, and societal advancements. In creating and researching it, VCD always entails perspectives from several disciplines. Its scientific dynamic is oriented toward the technical, social, economic, cultural, and technological aspects (Trocchianesi & Bollini, 2023). Nowadays, designers work primarily on projects that require a cross-platform approach, e.g., product branding, digital interface design, and visual information system design. This fact implies that VCD operates as a pure artistic activity and a strategic component in innovation discovery and industrial decision-making. Its responses to technological development are crucial for both its scientific (Zhang, 2025)

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and linguistic (Jatmiko, 2024) dimensions, as technological and industrial advances have expanded this field's interdisciplinary body of knowledge.

At its early stage of development, social research did not function as a dominant basis. The most focused considerations were industrial needs without involving other domains. Recently, viewed from its form and function, VCD can be classified into five scopes: 1) as promotional media, 2) as instructional media, 3) as informational media, 4) as entertainment media, and 5) as media of criticism. All scopes intertwine with the relevant social aspects and other disciplines, including the social and natural sciences (Wahyudi et al., 2025). Entering the new media era, VCD produces communicative and aesthetic visuals and has become a strategic space in shaping humans' meaning, identity, and experiences in the complex virtual space. Even now, the global society is familiar with artificial intelligence (AI) technology. The application of AI in VCD is a complex and multidimensional phenomenon. AI does not merely change the production process but also expands the design scope. Li et al. (2024) claim that AI increases the automation and efficiency of the design process and supports the designers' creative thinking and the design users' emotional understanding. In this context, VCD is required to go beyond the traditional scientific boundaries and build an interdisciplinary approach.

Interdisciplinary VCD is a conceptual strategy for understanding, explaining, and shaping the VCD phenomenon in the digital domain, combining diverse knowledge systems. A study by Sreenivasan & Suresh (2024) proves that AI enriches the design method, i.e., design thinking. Integrating AI into design methods will enhance creativity and innovation while emphasising the importance of users' rights, ethics, and privacy. Although AI offers vast potential to enrich the design process and users' experiences, this study also acknowledges emerging challenges, such as rapid technological development, differences across industrial contexts, complex ethical issues, and limited resources. Positioning the VCD as an interdisciplinary field will enhance creative practices and build a new theoretical foundation. The connection of VCD to many disciplines has shown how visual narration is constructed, interpreted, and disseminated in society. The visual industry is now closer to digital spaces, driving digitalisation across society. The new media becomes a new node in the VCD interdisciplinarity transformation.

This study applies Pierre Bourdieu's theory of practice to cope with these layered challenges and opportunities. Conceptually, the relational formula is (Habitus x Capital) + Field = Practice (Brown & Lloyd, 2024). In the VCD context, habitus refers to the designers' rooted personalities, tastes (Taha et al., 2023), and competencies developed through their education, professional culture, and social background. In addition to economic resources, capital encompasses symbolic, cultural, and technological aspects, e.g., design literacy, the designer's reputation, and device access. Capital, in its various forms, including cultural literacy, technical skills, and social networks, provides the resources available to designers when they position themselves within the field. Habitus displays the designers' internalised cultural tendencies and orientations that shape their aesthetic sensitivities, problem-solving strategies, and professional ethics. The field represents the dynamic design space shaped by institutional norms, the design industry, market power, and technological capabilities, which in turn shapes the context in which design practices are legitimised, fought for, and transformed. This study aims to identify VCD's interdisciplinary foundation by synthesising the knowledge from design studies, media studies, cultural sociology, and digital technology. This paper explores how Bourdieu's framework can explain the complex interaction between structure and agent in shaping VCD practices. This study aims to investigate how interdisciplinarity shapes Visual Communication Design practices in the new media era by drawing on Pierre Bourdieu's theory of practice. The specific objectives of this study are to: 1) identify interdisciplinary dimensions influencing contemporary VCD practices; 2) examine how habitus, capital, and field interact within AI-mediated design contexts and analyse the implications of interdisciplinarity for VCD theory, education, and practice.

2.0 Literature Review

The development of new media has shifted and developed the VCD field. Zhao (2024) stated clearly that VCD was an interdisciplinary practical field. VCD was no longer considered merely a visual aesthetic domain, but an intersection of art, digital technology, computational science, and the study of human-machine interaction. The presence of AI as a key technology in the new media era strengthened the interdisciplinary nature of VCD practices. Sun (2025) claimed VCD as practices undergoing a structural transformation in the new media era, mainly within the context of cultural digitalization. It indicated that interdisciplinarity in VCD did not happen only at the device level but also at the epistemological and methodological levels.

In line with those studies, (Yeo & Teo, 2020) underlined that visual communication designers in the science-based economy had shifted from merely visual designers to strategic actors leading the process of complex problem identification and solution encompassing the social, technological, business, and cultural aspects. This study also emphasized the importance of transdisciplinary learning, a learning approach exceeding discipline boundaries that enable the design and non-design knowledge to operate in VCD practices.

VCD is always closely related to signs and meanings, so it cannot be alienated from the discussion about them. Yanqing (2022) on the borderless characteristic of VCD asserted that the complex relations between symbols, culture, and audiences' cognition form visual meanings, so it must be approached from an interdisciplinary perspective to ensure effective communication. In Bourdieu's social practice framework, Darmawan (2024) explained that Bourdieu viewed social practices as not simply a result of an individual decision but rather a product resulting from the interaction among the disposition of individuals (habitus), resources (capital), and the social arena where those practices take place (field). Yanqing (2022) suggested that interdisciplinarity could not be separated from social practices.

Although Bourdieu's social practice theory did not discuss VCD directly, it provided a theoretical basis for understanding design as an interdisciplinary social practice in the new media context. A design practice was considered as a result of an interaction between a designer's habitus, socio-cultural capital, and media field formed by technological and industrial logic. Darmawan (2024) made a significant theoretical contribution to the interdisciplinary study of VCD, not through technical discussion but by providing an analytical framework to understand design as a social practice.

3.0 Methodology

This study employed a qualitative approach, using the descriptive-analytical method to scrutinize the interdisciplinarity of VCD practices in the new media era. The approach was chosen because it enabled the researchers to obtain a profound understanding of social processes and cultural practices, and the relation among the existing entities, specifically within the context of digital technology and AI development. The theoretical framework referred to Pierre Bourdieu's concepts of habitus, capital, and field, which were positioned as a major theoretical framework for reading the formation and reproduction of the interdisciplinary practices in the internalized machine-generated style VCD realm.

The concept did not function only as an analysis basis but was also used as a foundation in collecting and interpreting the data. Bourdieu's thinking was applied as an instrument for reading the phenomenon of interdisciplinarity in VCD practices. The habitus concept enabled the researchers to understand design practices not only as individual choices but also as the result of internalized social processes. The capital concept, the cultural, social, symbolic, and economic ones were used to analyze the resources belonging to and were staked by individuals and institutions. This capital appeared in the form of technology, academic legitimation, professional networking, and symbolic recognition that influenced designers' position in interdisciplinary practices.

Meanwhile, the field concept was used to map the social space where VCD practices are taking place, including educational institutions, creative industry, and the new media ecosystem. The field was understood as a relational space where negotiation, competition, and collaboration among actors with different capitals and habitus occured. Qualitative data was gathered by means of observation, document study, and then being analysed descriptive-analytically to view the position of interdisciplinarity of VCD practices in the new media era.

4.0 Findings

The findings highlight a configuration illustrating three major relations – (Habitus x Capital), (Habitus x Field), and (Capital x Field) – that respectively result in unique design behaviours and products in the AI-mediated design ecosystem (see Fig. 1).

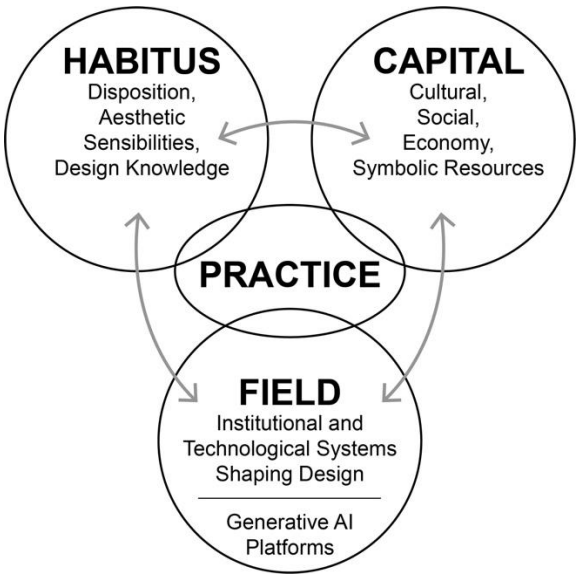

Fig. 1: Pierre Bourdieu's Theory of Practice Applied to the Adapted Design Practices in the Generative AI Era
(Source: Karnadi et al. 2025)

4.1 Habitus x Capital = Practice: Reflective Hybridisation and Adaptation

Designers with an adaptive professional disposition (habitus) and relevant capital (technological, cultural, symbolic) display the most creative synthesis. Their practices are characterised by integrating traditional design intuition with an AI system, resulting in a hybrid workflow, a joint creative process, and an innovative aesthetic language. Designers often mediate between conventional design ideology and the existing computational paradigm, forming new norms in visual culture. Their access to symbolic capital (for instance, awards, publications, or acknowledgements) enhances their visibility within the field, clarifying their position as a pioneer of a digitally perfected design method.

4.2 Habitus x Field = Practice: Adjustment, Resistance, and Recondition

When design habitus meets the field's structural challenges and opportunities but lacks adequate capital, the practice arises from convergence and dissonance. Designers whose disposition aligns with the evolving field's norms – including their responsiveness to automation, ethical engagement with AI, and openness to collaboration – tend to adopt AI carefully yet progressively. On the contrary, those whose disposition is rooted in an analogue methodology or a static design philosophy may experience conflicts, alienation, or

professional burnout. Institutional actors such as design schools, users or patrons, and software platforms now function as special agents that influence and recondition the design habitus through curriculum reformation, policies, and device integration.

4.3 Capital x Field = Practice: Strategic Optimisation and Structural Acceleration

When designers possess substantial capital, mainly technology or economy, but have less adjustment with the habitus, the practice tends to be strategically encouraged and market-oriented. The AI device's availability, access to high-performance hardware, or proximity to a digital innovation centre enables quick absorption of AI. However, this practice often prioritises productivity, efficiency, and scalability over critical reflection and conceptual depth. The interaction between Capital and Field, structured by platform modalism and algorithmic production, triggers an optimised, patterned, data-driven output that fulfils commercial demands. However, it may sacrifice originality or aesthetic considerations.

4.4 Comparative Synthesis: Practical Configuration in AI-based VCD Field

The findings are synthesised in Table 1, which illustrates the unique practices across all combinations of Bourdieu's theoretical components. These findings confirm that interdisciplinarity in DKV practice in the AI era is the result of a complex relational configuration. It's not simply the result of technological progress itself.

Table 1. The Synthesis of Practical Formation in Visual Communication Design in the AI Era

Theoretical Configuration	Occurred Design Practice	Characteristics in the AI Context
Habitus × Capital	Reflexive and Hybrid Practices	Creating together with AI, aesthetic innovation, and symbolic power
Habitus × Field	Adaptive or Resistant Practices	Ethical navigation, pedagogical influence, creative tension
Modal × Field	Optimal and Strategic Practices	Orientation to the speed, commercial efficiency, and platform dependency

(Source: Karnadi et al. 2025)

5.0 Discussion

VCD's interdisciplinarity is one of the decisive features in the digital era. As visual narration spreads across various fields, VCD serves as a mediator connecting many knowledge domains. Cross-disciplinary collaborations elevate innovation by combining several epistemologies and methodologies (Stremel, 2024), enriching the VCD theoretical framework and practical application. In Bourdieu's terminology, the interaction among fields widens designers' repertoire of cultural and symbolic capital. This condition encourages the continuous redefinition of the environment of practices through emerging interdisciplinary norms (see Table 2). The growing complexity of the communication system in the new media environment demands that practitioners and academics of VCD activate numerous disciplines. Visual communication has developed into an applied epistemology that involves considerations of systems, behavioural sociology, design sociology, media philosophy, and computation. It is no longer merely an artistic or aesthetic business.

Table 2. Intersectional Monodisciplinary and Interdisciplinary Visual Communication Design

Aspects	Monodisciplinary VCD	Interdisciplinary VCD
Focus	Internal design theory and visual language	Integration of other fields (e.g., technology, psychology, marketing)
Method	Studio practices, criticism, and design principles	Collaboration, research, data-based design
Output	Posters, books, branding, logo	Interface, campaign, infographics, immersive media
Purpose	Communication and aesthetic skills	Solving the complex social communication or technological problems

(Source: Karnadi et al. 2025)

5.1. Visual Communication Design in Pierre Bourdieu's Theory of Practice

Pierre Bourdieu's theory of practice provides a powerful conceptual framework for analyzing design as a field of structured social relationships structured by the relation among habitus, capital, and field. The relational formula (Habitus x Capital) + Field = Practice (Brown & Lloyd, 2024) shows how design practices take place because of the intersection between individuals' disposition and the dynamic socio-cultural condition. In this context, habitus is defined as cognitive and aesthetic disposition obtained from social experiences and design training Darmawan (2024). The AI advancement also shapes the designers' habitus by changing their way of thinking and creative process. Habitus frames the design sensitiveness, character, and orientation in VCD practices.

A field is a structured social space managing the design actors' position, power relations, and legitimation. In this study, the field is represented by a new media cyber community ecosystem, giving the social context, technology, and VCD practices institutions. Capital covers the social, cultural, symbolic, economic, and technological resources that determine the designers' position within the practical field. It functions as an internal capacity but also as a credential validated institutionally through education, media platforms, professional networking, and algorithmic technology Hikmat (2024). In this way, design practices are considered as a negotiation between a creative disposition and systemic structure, especially in the AI era.

Table 3. Comparison matrix of Habitus × Capital + Field = Practice in AI challenges for VCD

(Habitus × Capital)	(Habitus × Field)	(Capital × Field)

	Hybrid Creativity — integrating intuition and AI output	Convergent Practices— adapting to the AI-driven field	Instrumental Practices — adopting AI devices strategically
Practice	Adaptive Learning Practice — reshaping the workflow based on AI New Aesthetic Norms — internalize machine-generated style	Disoriented Practices — traditional approaches that do not match the field's demands Attitudes shaped institutionally —internalize the norms via design schools and organizations	Speeded up progress—obtaining excellence with high capital Market-based Practices—optimizing the content for involvement and protection

(Source: Karnadi et al. 2025)

Table 3 guides the exploration of the three intersections between habitus and capital, habitus and field, capital and field as explained below:

5.1.1 (Habitus x Capital) = Practice

When designers have a habitus oriented to the future and sufficient capital (cultural, technological, and symbolic), they tend to develop hybrid and innovative practices

1) Hybrid creativity: an intuitive design process integrated with AI devices results in original outputs using collaboration between humans' intention and machine-made.
2) Adapted education: designers reshape the workflow as a response to the AI capacity and continuous learning about rapid engineering, generative aesthetics, and data-based literacy.
3) New aesthetic norms: AI-generated visuals are internalised within designers' aesthetic frameworks, influencing layout, typography, colours, and style across all media formats.

This practice is most evident in emerging creative agencies and digital designers who embrace AI as a partner rather than a threat.

5.1.2. (Habitus x Field) = Practice

When designers' disposition interacts with the speedily growing VCD field, but with uneven capital distribution, they display an adaptive or tense practice.

1) Convergent practice: designers who embrace changes will adjust their skills and thoughts to the AI-dominated norms in education, industry, and freelance projects.
2) Disoriented practice: designers with traditional analogue or visual training may refuse or resist the redefinition of creativity, design process, and workflow forced by the AI
3) Institutionally shaped behaviour: design schools, professional agencies, and platforms influence the practices by integrating AI equipment and ideology into the structure of education and competition.

This fact reflects the socio-cultural reconditioning in all design professions, where some designers successfully navigate the new norms while others feel insecure.

5.1.3. (Capital x Field) = Practice

When designers have wide access to capital but do not perform in satisfactory harmony with habitus, they may often develop strategic practices, being encouraged by efficiency, or become opportunistic.

1) Instrumental practice: AI devices optimise speed and volume to meet market expectations, but an adequate creative transformation does not drive them.
2) Accelerated advancement: designers with a high technological and symbolic capital (e.g., visibility, funding, or circle influences) can quickly dominate the field, although the design ideology is less internalised.
3) Market-driven content: projects are optimised for scales, involvement, and automation – e.g., template library, social media content, and AI-assisted brand image building.

This dynamic illustrates how capital-field adjustment can succeed without involving values or creative visions that privilege structure in shaping practices.

5.2. Implications for VCD in the New Media Era

The combination of these findings underlines the fact that VCD practices today are not only a matter of skills or creativity but also the result of the relationship of: 1) Dispositional openness toward AI (Habitus); 2) Access to the resources and symbolic acknowledgement (Capital); and 3) Institutional, economic, and technological structure (Field). This framework offers a nuanced perspective on why some designers develop, innovate, or even lead in the AI transition process. In contrast, others adapt slowly, refuse, or are alienated.

6.0 Conclusion

Capital in its varied forms, including cultural literacy, technical skills, and social networks, determines the resources available for designers when they position themselves in a field. Designers with adaptive professional disposition (habitus) and relevant capital demonstrate the most creative synthesis. There are intersections of Habitus, Capital, and Field that are mutually adapted: Habitus x Capital = Practice: reflective hybridisation and adaptation; Habitus x Field = Practice: adjustment, resistance, and reconditioning; Capital x Field = Practice: strategic optimisation and structural acceleration. Visual communication moves from a purely artistic or aesthetic

business to an applied epistemology that considers systems, behavioural psychology, design sociology, media philosophy, and computation.

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Papers' Contribution to Related Fields of Study

This paper positions Visual Communication Design (VCD) as an interdisciplinary and socially engaged field in the new media era. Using a Bourdieusian perspective, it contributes a critical framework for rethinking VCD curricula beyond software skills, emphasising social awareness, cultural competence, and reflective–critical thinking, and highlighting VCD's role as a driver of social change. VCD can contribute more broadly to addressing issues such as sustainability, social inequality, cultural digitalization, and the democratization of information. The results of this research enable higher education in art and design, particularly VCD, to become not merely a place for technical learning, but also an arena for the production of meaning, values, and social critique.

References

Brown, D. H. K., & Lloyd, R. G. (2024). Using Critical Social Theory as Professional Learning to Develop Scholar—Practitioners in Physical Education: The Example of Bourdieu's Theory of Practice. Education Sciences, 14(2), 160. https://doi.org/10.3390/educsci14020160

Darmawan. (2024). Pierre Bourdieu's Theory of Social Practice: Understanding Habitus, Capital, and the Arena in Social Life. Journal La Sociale, 5(6). https://doi.org/10.37899/journal-la-sociale.v5i6.2131

Hapsari, S. (2025). Inovasi dalam Desain Grafis dan Visualisasi. Profilm Jurnal Ilmiah Ilmu Perfilman Dan Pertelevisian, 3(1), 76. https://doi.org/10.56849/jpf.v3i1.48

Hikmat. (2024). Cultural Capital and Educational Success: A Systematic Review of Bourdieu's Theory in Contemporary Educational Sociology. ENDLESS: International Journal of Futures Studies, 7(3), 57-73. https://doi.org/10.54783/endlessjournal.v7i3

Jatmiko, E., & Gittawati, A. A. F. (2024). Utilising Illustrations to Visualise Javanese Vocabulary at The Ngoko Level through Social Media Platforms. Environment-Behaviour Proceedings Journal, 9(SI23), 11–17. https://doi.org/10.21834/e-bpj.v9iSI23.6144

Li, H., Xue, T., Zhang, A., Luo, X., Kong, L., & Huang, G. (2024). The application and impact of artificial intelligence technology in graphic design: A critical interpretive synthesis. Heliyon, 10(21), e40037. https://doi.org/10.1016/j.heliyon.2024.e40037

Musliadi, M., Wahyudi, R. F., Muhlis, M., & Wahyudi, W. (2025). *Bahasa visual dalam iklan digital: Studi semiotika pada platform media sosial. Retorika: Jurnal Kajian Komunikasi dan Penyiaran Islam, 7*(1), 27–39. https://doi.org/10.47435/retorika.v7i1.3683

Sreenivasan, A., & Suresh, M. (2024). Design thinking and artificial intelligence: A systematic literature review exploring synergies. International Journal of Innovation Studies, 8(3), 297–312. https://doi.org/10.1016/j.ijis.2024.05.001

Stremel, S. (2024). Aportes epistemetodológicos de Pierre Bourdieu para a pesquisa no campo da Política Educacional. Praxis Educativa, 19, 1–26. https://doi.org/10.5212/PraxEduc.v.19.22842.057

Sun, B. (2025). Interdisciplinary Integration and Optimization of Visual Communication Design in the Era of Digitalized Cultural Tourism: A Study on Frontier Computing Technologies. In 5th International Conference on Management Science and Software Engineering (ICMSSE 2025). Atlantis Press. DOI: 10.2991/978-94-6463-958-2_4

Taha, K., Maani, H., Al Dwakiat, K., & Abu-Tayeh, K. (2023). An Analysis of Bourdieu's Habitus and Field Theory in Hamid's The Reluctant Fundamentalist. Theory and Practice in Language Studies, 13(1), 161–167. https://doi.org/10.17507/tpls.1301.18

Trocchianesi, R., & Bollini, L. (2023). Design, Digital Humanities, and Information Visualisation for Cultural Heritage. Multimodal Technologies and Interaction, 7(11), 102. https://doi.org/10.3390/mti7110102

Yanqing, Chen. (2022). Interdisciplinary research thinking, paths and methods of visual communication design. 2022 International Conference on Educational Informatization, E-commerce and Information System. DOI: 10.25236/iceieis.2022.029

Yeo, J., and Teo, C. (2020) Exploring transdisciplinary learning and lifelong training in visual communication design education, in Boess, S., Cheung, M. and Cain, R. (eds.), Synergy - DRS International Conference 2020, 11-14 August, Held online. https://doi.org/10.21606/drs.2020.143

Zhang, H. (2025). Integrating Big Data and AI for Sustainable Visual Communication in Modern Art Design. https://doi.org/10.2139/ssrn.5175805

Zhang, Z., & Chubotina, I. (2025). Evolution and innovation: Contemporary trends in graphic design. Art and Design, 2, 74. https://doi.org/10.30857/2617-0272.2025.2.7

Zhao, Yan. (2024). The synergistic effect of artificial intelligence technology in the evolution of visual communication of new media art. Heliyon, 10(18). https://doi.org/10.1016/j.heliyon.2024.e38008