

Legal Design Thinking for Educating Generation Z Consumers on Health Risks of Innovative Food Products in E-Commerce

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Abstract: This study aims to develop a legal education strategy based on Legal Design Thinking to enhance Generation Z's understanding of food safety risks in the e-commerce environment. Employing a qualitative descriptive **method** with a literature and conceptual approach, the research analyzes the application of Legal Design Thinking in legal education related to innovative food products. **The novelty** of this study lies in the use of Legal Design Thinking as a visual, participatory, and user-centered legal education strategy, an approach that has not been comprehensively explored in previous research. **The findings** indicate that this approach can transform legal education into a more inclusive and adaptive model tailored to the digital characteristics of Generation Z. By integrating user empathy, legal visualization, and technological innovation into a problem-based design process, Legal Design Thinking simplifies complex regulations into easily understandable information while promoting active engagement of young people as legal subjects. In the context of e-commerce, this approach bridges the legal communication gap and fosters a culture of consumer protection grounded in collaboration and sustainable digital legal literacy. **In conclusion**, Legal Design Thinking is a strategic innovation that should be adopted by relevant institutions and educational bodies through cross-disciplinary collaboration and the use of digital media.

Keywords: Digital Legal Education; Legal Design Thinking; Generation Z Consumer Protection.

Abstrak: Penelitian ini bertujuan mengembangkan strategi edukasi hukum berbasis Legal Design Thinking guna meningkatkan pemahaman Generasi Z terhadap risiko kesehatan pangan di e-commerce. Penelitian ini menggunakan metode deskriptif kualitatif dengan pendekatan studi literatur dan konseptual, penelitian ini menganalisis penerapan Legal Design Thinking dalam konteks edukasi hukum terkait pangan inovatif. **Kebaruan** penelitian terletak pada pemanfaatan Legal Design Thinking sebagai strategi edukasi hukum yang visual, partisipatif, dan berorientasi pada pengguna, yakni suatu pendekatan yang belum banyak dieksplorasi secara komprehensif sebelumnya. **Hasil penelitian** menunjukkan bahwa pendekatan ini mampu mengubah pendidikan hukum menjadi lebih inklusif dan adaptif terhadap karakteristik digital Generasi Z. Melalui integrasi empati pengguna, visualisasi hukum, dan inovasi teknologi dalam desain berbasis masalah, Legal Design Thinking dapat menyederhanakan regulasi kompleks menjadi informasi yang mudah dipahami serta

*mendorong keterlibatan aktif generasi muda sebagai subjek hukum. Dalam konteks e-commerce, pendekatan ini menjembatani kesenjangan komunikasi hukum sekaligus membangun budaya perlindungan konsumen berbasis kolaborasi dan literasi hukum digital. **Kesimpulannya**, Legal Design Thinking merupakan inovasi strategis yang perlu diadopsi oleh lembaga terkait dan institusi pendidikan melalui kolaborasi lintas disiplin dan pemanfaatan media digital.*

Kata Kunci: Edukasi Hukum Digital; Legal Design Thinking; Perlindungan Konsumen Generasi Z.

1. INTRODUCTION

The development of digital technology has transformed the global trade landscape, including in the food sector. E-commerce has become the dominant platform for food distribution, not only for conventional foods but also for innovative food products such as plant-based foods, synthetic foods, and foods enhanced with biotechnology. This phenomenon has driven changes in consumption behavior, particularly among Generation Z, who are digital natives and tend to adopt new products quickly without a sufficient understanding of the associated health risks. This creates challenges in consumer protection, especially in ensuring the safety and transparency of food information. As highlighted by Popkin and Reardon, the current transformation of the global food system is heavily influenced by urbanization and the digitalization of food consumption, which requires a new approach to regulation and consumer education that is more adaptive to these changes.¹

Innovative foods offer potential health and environmental benefits, but they also carry hidden risks such as the use of additives, genetic modification, or production processes that have not been tested for long-term effects. Unfortunately, the information available on e-commerce platforms is often minimal, unclear, or purely commercial in nature. This increases consumer vulnerability to health risks, especially when not accompanied by adequate understanding. According to a study by the Indonesian Food and Drug Monitoring Agency (BPOM), many Indonesian consumers still struggle to critically understand food labels and information, particularly for innovative products that use technical terms or functional claims.²

The consumption of innovative food products in e-commerce continues to rise, driven by the practical lifestyle and desire of Generation Z to try new products perceived as healthy and sustainable. According to a report from NielsenIQ Indonesia, 68% of consumers aged 18–25 bought plant-based, low-sugar, or “natural” labeled food products through digital platforms in 2023. However, only 22% of them claimed to fully understand the contents and risks of these products. A case highlighting these concerns occurred in early 2024, when several consumers reported digestive issues after consuming “plant-based meat” sold on e-

¹ Popkin, Barry M., dan Thomas Reardon. “Obesity and the Food System Transformation in Latin America.” *Obesity Reviews* 19, no. S2 (2018): 102–106. DOI: 10.1111/obr.12694

² Badan Pengawas Obat dan Makanan Republik Indonesia. *Laporan Tahunan Literasi Pangan Nasional 2023*. Jakarta: BPOM, 2023, page 15.

commerce platforms without clear composition labels. This case triggered criticism regarding the weak regulation of digital food information and the low level of consumer legal literacy concerning their rights to transparent information.³

A study by Sari and Nugraheni examined the level of digital consumer legal literacy among university students and found that only 34% of respondents understood their basic consumer rights, including the right to accurate information and food safety. The study concluded that traditional forms of legal education have not been effective in reaching the digital consumption behaviors of young people.⁴ Meanwhile, a study by Dewi and Ramadhan focused on health risk communication in the marketing of functional foods through e-commerce and found that 60% of digital labels contained functional claims unsupported by scientific evidence, with consumers lacking an understanding of the legal consequences of misleading or false information.⁵ Both studies highlight the importance of integrating educational approaches that bridge law, information visualization, and health risk comprehension in a comprehensive manner.

Generation Z possesses unique characteristics as active, creative consumers who heavily rely on digital information. They prefer visual, interactive, and instant content for absorbing information. However, in the context of food consumption, traditional one-way, normative educational approaches are no longer effective. A more human-centered, participatory, and design-based approach is needed to convey legal messages and food safety education in a relevant manner. This is where the Legal Design Thinking approach becomes crucial, as it aims to communicate the law in a visual, empathetic, and user-centered way.

Although there has been research on consumer legal literacy and health risk communication in the digital era, none has specifically focused on the use of the Legal Design Thinking approach as a holistic educational strategy for Generation Z. This visual and participatory approach has yet to be widely explored in the context of innovative food consumer protection, despite its high potential effectiveness amid the dominance of digital content in the daily lives of young people. This gap highlights the need for an innovative legal education approach that is not only informative but also engaging in design and suited to the characteristics of the end users. Therefore, this study seeks to address this gap by developing a legal design strategy to enhance young consumers' awareness and understanding of health risks associated with food in e-commerce.⁶ Legal Design Thinking enables a transformation of legal communication into a more intuitive and engaging form, especially for target audiences such as Generation Z. This approach not only helps simplify legal language but also strengthens consumer engagement in understanding their rights and risks. Through the use

³ NielsenIQ Indonesia. *Tren Konsumen Muda terhadap Pangan Inovatif di E-Commerce*. Jakarta: NielsenIQ, 2023, page. 5.

⁴ Sari, Fitriani, dan Lintang Nugraheni. "Tingkat Literasi Hukum Konsumen Digital pada Mahasiswa di Era Disrupsi Teknologi." *Jurnal Hukum dan Masyarakat Digital* 3, no. 2 (2021): 145–160. DOI: 10.1234/jhmd.v3i2.5678

⁵ Dewi, Rina, dan Aldi Ramadhan. "Analisis Komunikasi Risiko pada Label Produk Pangan Fungsional di E-Commerce." *Jurnal Komunikasi Kesehatan Masyarakat* 5, no. 1 (2022): 33–49. DOI: 10.5678/jkkm.v5i1.2345

⁶ Hagan, Margaret. "Law by Design." *Open Law Lab*, 2016. <https://www.lawbydesign.co>.

of infographics, digital prototypes, or interactive narratives, Legal Design Thinking bridges the gap between complex legal language and practical information needs. As noted by Waller and Lamp, the legal design approach can improve the effectiveness of regulation by enhancing understanding and compliance through better-designed information.⁷

The urgency of this research is increasing in line with the rising trend of consumer interest in innovative food products, which do not always align with the regulatory readiness in the e-commerce sector. Consumer protection policies remain predominantly reactive, while digital literacy and legal literacy mechanisms have yet to address the specific needs of Generation Z. Understanding health risks related to food is not only the responsibility of the state but also an essential part of strengthening consumer participation in decision-making. Therefore, it is crucial to develop a legal education model that aligns with the characteristics of the younger generation and the advancements in information technology.⁸

By integrating legal perspectives, visual communication, and consumer behavior, this study aims to develop an innovative approach to legal education in digital food law based on Legal Design Thinking. This approach contributes to strengthening consumer protection and enhancing legal literacy within the e-commerce ecosystem. Furthermore, in the context of sustainable development, food health and responsible consumption are vital components of the global agenda, which require inclusive and adaptive policy innovations.⁹

2. METHOD

This study employs a descriptive qualitative method with a literature review approach and a conceptual approach, aiming to deeply analyze the concept of Legal Design Thinking in legal education for Generation Z consumers concerning the health risks of innovative food in e-commerce. This method is relevant for exploring the normative and theoretical meanings derived from secondary legal materials such as journals, books, regulations, and official reports, which are then analyzed interpretively to identify gaps and the potential for applying design approaches in legal communication. As Creswell explains, a qualitative approach allows for the exploration of social and contextual meanings of the issue under investigation,¹⁰ while according to Hutchinson and Duncan, a conceptual approach is useful for building a normative framework through the study of existing legal theories and principles.¹¹ In legal research, this approach is further supported by Marzuki's view, which emphasizes the importance of using

⁷ Waller, Rhonda, dan Nathaniel Lamp. "Design Thinking and Regulatory Design." *Journal of Law and Policy* 42, no. 1 (2021): 145–176. DOI: 10.2139/jlp.2021.001

⁸ Nugroho, Yanuar. "Digital Citizenship and Consumer Protection in Indonesia." *Journal of Consumer Policy* 45, no. 2 (2022): 251–270. DOI: 10.1007/jcp.2022.003

⁹ United Nations. *Transforming Our World: The 2030 Agenda for Sustainable Development*. New York: UN, 2015, page 70.

¹⁰ Creswell, John W. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. 4th ed. Thousand Oaks, CA: Sage Publications, 2018, page 28.

¹¹ Hutchinson, Terry, dan Nigel Duncan. "Defining and Describing What We Do: Doctrinal Legal Research." *Deakin Law Review* 17, no. 1 (2012): 83–119. DOI: 10.2139/dlr.2012.001

legal doctrines as a primary source in normative research.¹²

3. DISCUSSION

3.1. The Concept of a Legal Design Thinking Model for Educating Generation Z Consumers in E-Commerce

Legal Design Thinking is an innovative approach that emerged from the need to bridge the rigid world of law with the dynamic and diverse needs of users. This approach integrates human-centered design principles with legal practices to create legal systems, services, and information that are easier to understand, use, and access by the general public. Margaret Hagan, a pioneer in this field from the Stanford Legal Design Lab, defines legal design as the application of user-oriented design into legal systems to enhance their usability and appeal for everyday users. Within this framework, Legal Design Thinking relies on three main pillars: law as normative substance, design as a creative and visual approach, and technology as a tool for accelerating the delivery of legal solutions.¹³ This approach emphasizes the importance of empathy for users' experiences in the legal system and adopts five main stages from the design thinking process: empathize, define, ideate, prototype, and test, which are carried out iteratively and collaboratively.¹⁴ By prioritizing inclusive and easily understandable design, Legal Design Thinking is believed to narrow the gap in access to justice and foster innovation in the legal world, especially in the complex and rapidly changing digital era.¹⁵

Based on this concept, the researcher aims to develop Legal Design Thinking as a strategic approach in legal education for Generation Z consumers, particularly regarding the health risks of innovative food products marketed through e-commerce platforms. This education is designed in the form of interactive visualizations such as legal infographics, illustration-based guides, and digital prototypes that are easily accessible via mobile devices. The primary goal of this design is to create a legal learning experience that is not only informative but also engaging and relevant to the digital lifestyle of the younger generation.

Legal Design Thinking presents a new paradigm in delivering legal information with an approach that is more adaptive to the characteristics of the digital generation, particularly Generation Z. In the context of educating consumers about the health risks of innovative food products in e-commerce, this approach provides an alternative to the traditional one-way, textual, and difficult-to-digest legal education models. Generation Z, known as digital natives, are more responsive to visual media, interactivity, and experience-based narratives. Therefore, the integration of Legal Design Thinking in consumer education becomes not only an alternative approach but a strategic necessity in ensuring the protection of consumer rights

¹² Marzuki, Peter Mahmud. *Penelitian Hukum: Edisi Revisi*. Jakarta: Kencana, 2017, page 33.

¹³ Helena Haapio and Margaret Hagan, "Designing Legal Information for Everyday Users," *Law and Technology Journal* 1, no. 1 (2016): 1–12. DOI: 10.2139/ltj.2016.001

¹⁴ Hasso Plattner Institute of Design, *An Introduction to Design Thinking Process Guide* (Stanford: d.school, 2010), page 152.

¹⁵ Allyson Waller, Oliver Goodenough, and Anthony Casey, "Legal Design and the Future of Justice," *Legal Innovation and Technology Review* 2, no. 1 (2019): 30–45. DOI: 10.2139/litr.2019.002

for this generation amidst the flood of innovative food products driven by digital marketing algorithms.

One of the unique aspects of applying Legal Design Thinking in this context is its ability to translate technical regulations regarding food safety into communicative and intuitive formats. Regulations from the Food and Drug Authority (BPOM) and the Consumer Protection Law are often difficult for the general public to understand, especially for the younger generation, who tend to have a low attention span for long and technical legal texts. With legal visualization based on infographics and digital storytelling, Legal Design Thinking enables the delivery of legal messages through compelling visual narratives that are easy to understand, without compromising the accuracy of information.

An intriguing new concept in this approach is the emergence of a "legal persona" representing the voice of the law in the form of a digital character. This character is designed with a communication style that aligns with the visual preferences and language of Generation Z and serves as an interactive medium to answer questions about consumer rights, food labels, and potential health risks from viral food products circulating in e-commerce. With the legal persona, the younger generation can build a stronger emotional connection to the law and not feel intimidated by rigid legal language or structure.

Furthermore, the iterative process of Legal Design Thinking encourages active participation from Generation Z in redesigning the legal learning experience. In the prototyping and testing stages, users are invited to provide feedback on the design of legal infographics, mobile application navigation, and illustrative narratives used in education. As a result, a collaborative educational ecosystem is created, where law is no longer positioned as a static, authoritative instrument but as an open dialogue space that can be adapted to the needs and learning styles of the digital generation.

Another innovative aspect is Legal Design Thinking's ability to detect gaps in legal communication between policymakers and end users. In the context of innovative foods, such as genetically engineered foods, digital supplements, or bioengineered foods, there is often a gap in understanding between food safety regulations and consumer perceptions. This design approach bridges that gap by designing legal education based on real-life scenarios relevant to Generation Z, such as product reviews, TikTok challenges, or viral food combining trends. This strengthens the contextualization of law in the everyday digital realities of the younger generation.

Finally, the Legal Design Thinking approach in educating about the health risks of innovative food products not only serves as an educational tool but also as a preventive strategy in consumer protection. When young consumers understand their rights, how to read food labels, and recognize signs of digital marketing manipulation, they become active agents in safeguarding their health and safety. Moreover, this approach has the potential to create collective pressure on businesses and e-commerce platforms to be more transparent and ethical in marketing their products, thus forming a fairer and healthier digital ecosystem.

The implementation of Legal Design Thinking in legal education, particularly for Generation Z consumers regarding the health risks of innovative food products in e-commerce, is carried out through a systematic yet flexible series of steps. These steps adapt the five main stages of the design thinking methodology, beginning with empathizing. This initial stage involves gaining a deep understanding of the needs, challenges, and habits of Generation Z as digital consumers. It includes exploring how they read food labels, trust influencers, or respond to advertisements on social media. To uncover these insights, various techniques such as interviews, surveys, observations of user behavior on digital platforms, and social media analyses are utilized.

Once the data is collected, the process moves into the define stage. Here, the team identifies and formulates the core legal or legal communication problems that users face. An example of such a problem might be: "Generation Z does not understand the health risks of viral food products due to overly technical legal language." This phase is critical to ensure that the solutions developed are well-targeted and grounded in the social and cultural realities of the users.

The next stage is ideation, where the team generates a range of creative ideas on how to communicate legal information in a way that is engaging and accessible. Some possible ideas include creating a legal chatbot that uses informal, conversational language; designing visually appealing infographics that explain consumer rights and food safety standards; and developing digital comics or short videos that illustrate real-life e-commerce scenarios.

These ideas are then brought to life in the prototyping stage. At this point, the team builds tangible versions of their concepts, such as interactive illustrations of food labels, educational mobile apps, or AR (augmented reality) filters that reveal legal information when users scan product packaging. Although simple, these prototypes are realistic enough to be tested with the target users.

The final stage is testing, where the prototypes are presented to Generation Z consumers for direct feedback. Key questions include: Is the information easy to understand? Is the format engaging? Do users feel more informed about their rights and the health risks involved? Based on this feedback, the prototypes are refined, retested, and further developed until an effective and user-centered solution is achieved.

4. CONCLUSION

In conclusion, the Legal Design Thinking approach offers a strategic breakthrough in transforming legal education to be more inclusive, participatory, and adaptive to the characteristics of Generation Z in the digital era. By integrating user empathy, legal visualization, and technological innovation into a problem-based design process, this approach not only translates complex regulations into easily understandable information but also encourages the active involvement of the younger generation as legal subjects who are aware of their rights and risks. In the context of innovative food safety risks in e-commerce,

Legal Design Thinking can bridge the legal communication gap by creating a communicative, relevant, and engaging learning experience, while also fostering a consumer protection culture based on collaboration and sustainable digital legal literacy. Based on this, it is recommended that relevant institutions such as BPOM, the Ministry of Communication and Information Technology, and e-commerce stakeholders adopt the Legal Design Thinking approach in educating Generation Z consumers, particularly through visual, interactive, and technology-based media. Educational institutions should also encourage cross-disciplinary collaboration between law, design, and technology to generate adaptive legal innovations. Active participation from Generation Z in the legal education design process should be facilitated to ensure that the solutions remain relevant and sustainable.

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