

# DIGITAL ENTREPRENEURIAL MINDSET DEVELOPMENT: STRATEGIES TO INCREASE THE ECONOMIC COMPETITIVENESS OF INDONESIA'S GEN Z IN THE E-COMMERCE ERA

## (A Study Systematic Literature Review)

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### *Abstract*

*This systematic literature review (SLR) article discusses the role of e-commerce education to increase the economic growth of generation z (Gen Z) in Indonesia. The purpose of this study is to determine aspects of e-commerce education to support the economic growth of Gen Z in Indonesia. E-commerce education is understood as a place to form the right self-potential to improve Gen Z's digital skills. The method of writing a systematic literature review (SLR) article is a library research method sourced from the Scopus database. The results of this literature review study found that e-commerce education integrated with industry can create Gen Z who have skills in managing digital technology, creativity, and are able to adapt according to the job market. The implications of this study are to encourage the government, academics, and industry players to assist Gen Z through e-commerce education so that their potential becomes a source of economic growth in Indonesia in the future.*

**Keyword:** *E-commerce Education, Economic Growth, and Indonesia's Generation Z*

## 1. INTRODUCTION

In recent years, Indonesia has emerged as one of the fastest growing digital economies in Southeast Asia, with e-commerce playing a key role in this transformation (Setyaningrum & Muafi, 2023). As the digital revolution takes place in Indonesia, it is important to equip the younger generation, especially Generation Z (Gen Z), with the skills and knowledge needed in e-commerce. This generation, characterized by technological sophistication and entrepreneurial spirit, is at the forefront of Indonesia's economic future (Oktaviani et al., 2024).

Thus, e-commerce education serves as an important instrument to empower Gen Z, enabling them to leverage digital platforms for business opportunities, innovation, and job creation (Putri & Wardana, 2023). By fostering an understanding of online marketing, digital marketing, and financial literacy, educational initiatives can prepare this generation to navigate the complexities of the digital economy (Islami, 2019). In addition, along with increasing urbanization and internet accessibility in Indonesia, the potential for e-commerce to drive economic growth is increasingly apparent (Darman et al., 2024).

Effendy & Sunarsi, (2020) explained that one of the factors causing the decline in Indonesia's digital economy from e-commerce is the lack of facilities that support entrepreneurial skills for Gen Z. Gen Z still uses simple technological tools so that it is difficult to compete in quality and quantity with developed countries (Effendy & Sunarsi, 2020). The results of research from data from the Central Statistics Agency (BPS) through CEIC recorded 58.4 percent of poor facilities for students in Papua in 2022 (Ashin, 2024). According to Ahmad Yahya Alchilma (2023), educational facilities such as buildings, laboratories, libraries, technological tools and other educational facilities are greatly reduced in Indonesia.

The novelty offered in this study seeks to explore how e-commerce education can not only improve individual abilities, but contribute to broader economic development goals in Indonesia. By investing in Gen Z education, Indonesia can harness the full potential of its young generation, fostering a dynamic entrepreneurial ecosystem that drives the nation towards sustainable economic growth. To support this novelty, the researcher formulated the research objectives, namely: (a) to determine the factors needed in e-commerce education for Indonesia's economic growth, (b) to analyze the role of e-commerce education in improving Gen Z's digital and entrepreneurial skills.

## **2. THEORY**

### **E-Commerce Education**

E-Commerce is an electronic media used to conduct transactions between sellers and buyers using the internet network (Kazak et al., 2023). Sellers and buyers who are separated by long distances can conduct transactions to buy and sell goods quickly, efficiently and easily (Pham et al., 2023). This certainly brings convenience from the difficulties found in traditional businesses. Buyers do not have to come directly to the store to buy goods. The transaction process between sellers and buyers also does not have to meet in person. E-Commerce brings a new business model that is symbiotic, coordinated, and orderly supported by the internet network and digital media (Olutuase et al., 2023).

According to Wang & Kim, (2023), e-commerce is an education that is in great demand by Gen Z because e-commerce education can provide accessibility, convenience, and flexibility in learning. Gen Z can easily access various educational resources for business development both personally and collaboratively. The e-commerce learning system is also not tied to a certain space and time and does not only understand the concepts and theories of e-commerce. Students are given plenty of space to practice market creation and transactions through digital media to develop digital business skills. Application-oriented e-commerce education and training are essential in developing a business (Lankshear & Knobel, 2016).

### **Gen Z Economic Growth**

Indonesia's Generation Z (Gen Z) is poised to significantly influence the country's economic growth through their unique characteristics and involvement in various sectors (Chen et al., 2021). As digital natives, they leverage technology to drive innovation,

investment, and sustainable practices, thereby reshaping Indonesia's economic landscape (Issn et al., 2024). According to Imjai et al., (2024), Gen Z needs to be involved in active participation in the digital economy, driving new business models, and creative industries. In addition, research results from Wulansari, (2024) show that Gen Z Indonesia is beginning to realize the importance of investment to improve the economy in the future. With that, e-commerce education implemented in educational institutions needs to maximize Gen Z's contribution to Indonesia's economic growth.

### 3. RESEARCH METHOD

#### Research Design

This study uses a systematic literature review (SLR) to understand the role of e-commerce education on the economic growth of Gen Z in Indonesia. A systematic literature review (SLR) is very useful in combining findings from several studies that are relevant to the research topic. The combination of relevant findings occurs using the prism method in a systematic literature review (SLR) (Bonfanti et al., 2024). The prism method will provide a methodological framework in searching, assessing, and synthesizing relevant literature to comprehensively understand the results of current research (Snyder, 2019). In addition, this study will determine the objectives, the literature is always relevant, use appropriate literature, synthesize and analyze the results, and present the discussion.

#### Data and Literature Search

The first stage carried out by researchers is determining the aspects to be observed or analyzed based on the research topic. Then the researcher will conduct a separate review of relevant literature on the aspects to be observed or analyzed in the research. Relevant literature is collected from the most reputable and comprehensive databases, such as Scopus. The following is relevant literature collected from comprehensive databases, namely "e-commerce education," "economic growth," and "Gen Z Indonesia." Relevant literature collected in English in the fields of digital, economics, business, management and social.

**Table 1. Search strings in Emerald Publishing**

Databases	Keywords
Scopus	TITLE-ABS-KEY "e-commerce education" OR "economic growth" AND "indonesian's gen z"

**Source:** Data Processed, 2025

#### Literature Screening Criteria

Researchers use inclusion and exclusion criteria in selecting literature that will be the source of the writing. Literature that meets the inclusion criteria is as follows, (1) literature related to e-commerce education, (2) literature related to economic growth, (3) literature related to the lives of Gen Z Indonesia, and (4) literature written in English. While literature that meets the exclusion criteria, such as (1) literature from books, (2) literature that is not written in English, (3) literature that is not accessible, and (4), literature that is not part of

the research topic. All literature will be reviewed by researchers starting from the title, abstract, content and conclusion.

## 4. RESULTS AND DISCUSSION

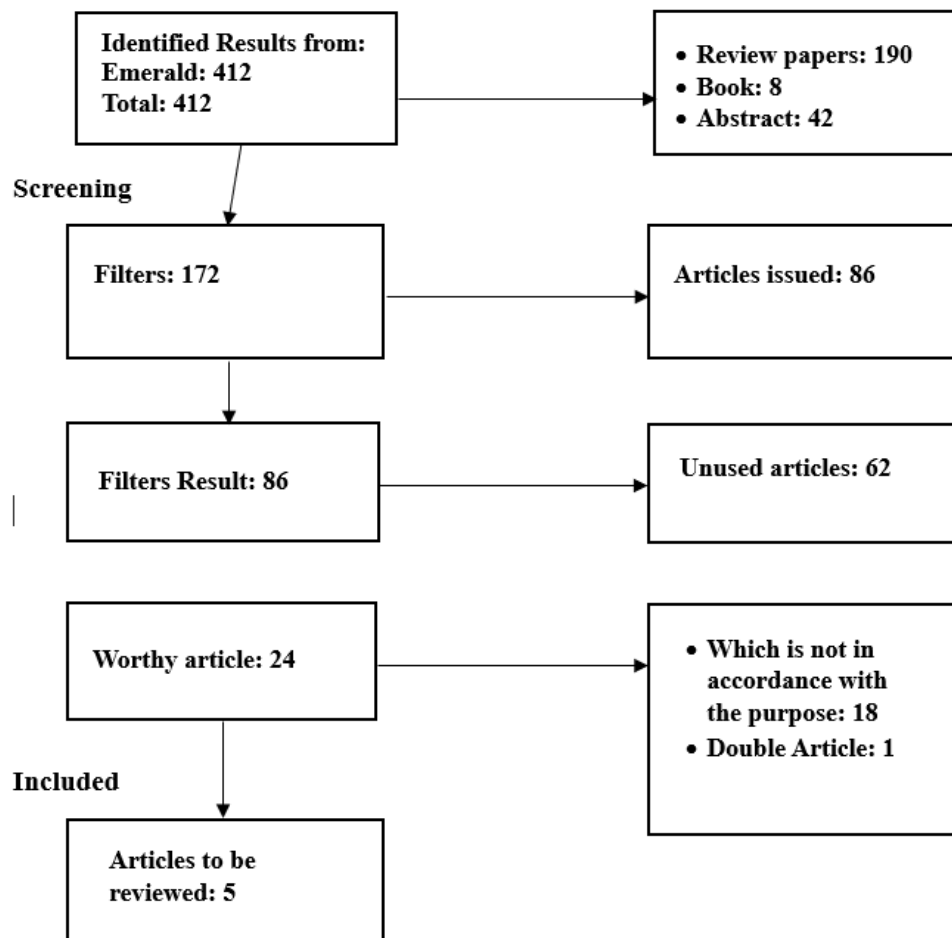
### Results

#### Literature Identification

Researchers collected articles published from 2019 to November 2024 as relevant literature to be included in the analysis. A search of the Scopus database resulted in 412 articles. The total number of search results from 1 database was 172, but after identification, those that matched the research articles were 86 articles. 86 articles were screened based on 4 criteria in the inclusion process, there were 24 research articles. The 24 research articles will be selected again based on the title and abstract and only 18 articles remain. In the final stage, 18 research articles will be selected based on relevant research objectives according to the title. The results of the selection contained 5 research articles that were very relevant to the researcher's objectives.

**Table: Literature Identification through Scopus**

#### Identification



### Research Article Resume That Matches This Research

No	Research & Year	Research Result
1	(Yang & Luo, 2020)	This article proposes a three-level progressive training model for e-commerce innovation, namely industry education integration, industry university cooperation, and collaborative education.
2	(Jiménez-Rodríguez et al., 2022)	Our findings underline the need to improve digital skills at primary and secondary school levels, to enable future citizens to manage e-commerce based on a solid foundation of computer knowledge and digital competencies, and with the confidence to become full digital citizens.
3	(Wang & Kim, 2023)	E-commerce adoption plays a mediating role in student performance, student perception of online learning, student attitudes, and student academic achievement.
4	(Gunawan, 2024)	The creativity and innovation of Indonesian entrepreneurial individuals emerged as the characteristics that most influenced economic growth.
5	(Kuckertz et al., 2020)	Economic growth can be achieved through three holistic frameworks consisting of entrepreneurial activities, entrepreneurial ecosystems (or innovation clusters and systems) at the meso level, and government vision and support at the macro level.

**Source:** Data Processed, 2025

Of the 5 articles analyzed, 3 articles explain the importance of e-commerce education for today's Indonesian Gen Z. The 3 articles are: (Yang & Luo, 2020), (Jiménez-Rodríguez et al., 2022), and (Wang & Kim, 2023). Yang & Luo, (2020) explained that e-commerce education needs integration with industry needs, cooperation and collaboration with industry. This is important to produce e-commerce innovations created by Gen Z in accordance with the times. Jiménez-Rodríguez et al., (2022) showed that e-commerce skills are strengthened by computer education, digital technology, and self-confidence in Gen Z itself.

Meanwhile, Wang & Kim, (2023) explained that the results of e-commerce adoption can improve students' online learning, student attitudes, and student academic achievement. Of the 5 articles analyzed, 2 articles explained about economic growth which is a major contribution of Gen Z, namely articles from (Gunawan, 2024) and (Kuckertz et al., 2020). Gunawan, (2024) explained that Gen Z's major contribution to economic growth is through creativity and innovation. Meanwhile, Kuckertz et al., (2020) explained that Gen Z must start with entrepreneurial activities, build an entrepreneurial ecosystem, and ask for support from the government to increase Indonesia's economic growth.

## 5. CONCLUSION

This study shows that e-commerce education has a very crucial role in preparing Gen Z to face the challenges of an increasingly digital workforce (Jiménez-Rodríguez et al., 2022). E-commerce education needs to be integrated with industry needs so that Gen Z has skills that are relevant to the job market. In addition, Gen Z also needs to have skills such as the ability to manage digital technology, creativity, and the ability to adapt to technological developments (Akhmadi et al., 2021). The positive impact of e-commerce education can increase learning motivation, academic achievement, and positive attitudes towards changes in an increasingly digital job market (Al-Qadasi et al., 2024).

Gen Z also has great potential to become a driver of Indonesia's economic growth in the future. This is because Gen Z tends to be more creative and innovative in creating new products and services according to market needs (Zhu et al., 2023). In addition, Gen Z has an interest in building their own businesses by creating new jobs and utilizing digital technology to develop businesses and increase productivity (Kakouris et al., 2024). The results of this study are certainly in line with the Human Capital Theory which explains that investment in education and training (e-commerce education) will improve the quality of the workforce, which in turn will increase productivity and income (Boldureanu et al., 2020). E-commerce education that is relevant to the needs of the labor market will help Gen Z more easily get jobs and have a career in an increasingly digital world (Ijafb) Othman et al., 2021).

The results of the article analysis show that Gen Z has great potential to become a driver of economic growth in Indonesia. Gen Z has the ability in digital technology, creativity and adaptability in accordance with the development of the job market. However, Gen Z needs to be supported by various parties, including the government, academics, and industry players to develop the potential that exists within Gen Z. As a recommendation for further researchers to explore the challenges and opportunities faced by Gen Z, as well as how to formulate the right strategy to support the growth of Gen Z skills in Indonesia. The shortcomings of this study are limited to the factors obtained when Gen Z receives e-commerce education. Researchers did not further examine the extent of the level of digital technology skills, creativity, and adaptability of Gen Z so far.

## 6. REFERENCES

- Akhmadi, H., Susanawati, Utami, N. P., & Widodo, A. S. (2021). Use of whatsapp application on fruit marketing communication: A traders' experience. *Journal of Information and Organizational Sciences*, 45(1), 95–113. <https://doi.org/10.31341/jios.45.1.6>
- Al-Qadasi, N., Zhang, G., Al-Jubari, I., Al-Awlaqi, M. A., & Aamer, A. M. (2024). Entrepreneurship education and entrepreneurial behaviour: Do self-efficacy and attitude matter? *International Journal of Management Education*, 22(1), 100945. <https://doi.org/10.1016/j.ijme.2024.100945>
- Boldureanu, G., Ionescu, A. M., Bercu, A. M., Bedrule-Grigoruță, M. V., & Boldureanu, D. (2020). Entrepreneurship education through successful entrepreneurial models in higher education institutions. *Sustainability (Switzerland)*, 12(3), 1–33. <https://doi.org/10.3390/su12031267>
- Bonfanti, A., De Crescenzo, V., Simeoni, F., & Loza Adauí, C. R. (2024). Convergences and divergences in sustainable entrepreneurship and social entrepreneurship research:



- A systematic review and research agenda. *Journal of Business Research*, 170(February 2023), 114336. <https://doi.org/10.1016/j.jbusres.2023.114336>
- Chen, L., Ifenthaler, D., & Yau, J. Y.-K. (2021). Online and blended entrepreneurship education: a systematic review of applied educational technologies. In *Entrepreneurship Education* (Vol. 4, Issue 2). Springer Singapore. <https://doi.org/10.1007/s41959-021-00047-7>
- Darman, A., Suprianto, A., Wati, A. P., Murwani, F. D., & Wardana, L. W. (2024). Digital Innovation in E-Commerce Education Towards Industry 5.0: Improving Student Competencies and Insights A Systematic Literature Review. *Journal of Applied Business, Taxation and Economics Research*, 3(6), 652–662. <https://doi.org/10.54408/jabter.v3i6.313>
- Effendy, A. A., & Sunarsi, D. (2020). Persepsi Mahasiswa Terhadap Kemampuan Dalam Mendirikan UMKM Dan Efektivitas Promosi Melalui Online Di Kota Tangerang Selatan. *Jurnal Ilmiah MEA (Manajemen, Ekonomi, Dan Akuntansi)*, 4(3), 702–714.
- Gunawan, A. F. (2024). The impact of entrepreneurial characteristics and competencies on business performance in the creative industry in Indonesia. *Asia Pacific Journal of Innovation and Entrepreneurship*, 18(3), 300–317. <https://doi.org/10.1108/apjie-09-2023-0172>
- Ijafb) Othman, I. W., Mokhtar, S., Tham, A., & Yong, K. (2021). The Significance of Entrepreneurship Education Literacy in The Era of Digital Transformation: Graduates of The Post-Pandemic Covid-19 Unemployment Crisis. *International Journal of Accounting, Finance and Business*, 6(6), 1–21.
- Imjai, N., Aujirapongpan, S., & Yaacob, Z. (2024). Impact of logical thinking skills and digital literacy on Thailand's generation Z accounting students' internship effectiveness: Role of self-learning capability. *International Journal of Educational Research Open*, 6(November 2023), 100329. <https://doi.org/10.1016/j.ijedro.2024.100329>
- Islami, N. N. (2019). The effect of digital literacy toward entrepreneur behaviors through students' intention entrepreneurship on Economics Education Study Program at Jember. *IOP Conference Series: Earth and Environmental Science*, 243(1). <https://doi.org/10.1088/1755-1315/243/1/012084>
- Issn, A., Chafe, I. E., Luiz, C., Avalia, S., & Review, D. B. (2024). *LIFELONG DIGITAL LEARNING : " COMPUTER LITERACY , " " DIGITAL LITERACY , " AND " DIGITAL COMPETENCE " AS DIMENSIONS FOR DIGITAL SKILLS* Maira Rocha Santos 1 1 INTRODUCTION Technological evolution and the digitalization of society have made learning and techn. 1–16.
- Jiménez-Rodríguez, E., Vázquez-Cano, E., Cebrián-Hernández, Á., & López-Meneses, E. (2022). Influence of Computer Knowledge and Level of Education on Spanish Citizens' Propensity to Use E-Commerce. In *Social Science Computer Review* (Vol. 40, Issue 6, pp. 1376–1392). <https://doi.org/10.1177/08944393211007313>
- Kakouris, A., Tampouri, S., Kaliris, A., Mastrokoulou, S., & Georgopoulos, N. (2024). Entrepreneurship as a Career Option within Education: A Critical Review of Psychological Constructs. *Education Sciences*, 14(1). <https://doi.org/10.3390/educsci14010046>

- Kazak, A., Sergeeva, E., Kushkhova, Z., Ryvkina, O., & Tsay, E. (2023). Information technologies and E-commerce in education in the sphere of tourism and hospitality. *E3S Web of Conferences*, 371. <https://doi.org/10.1051/e3sconf/202337105009>
- Kuckertz, A., Berger, E. S. C., & Brändle, L. (2020). Entrepreneurship and the sustainable bioeconomy transformation. *Environmental Innovation and Societal Transitions*, 37(November 2019), 332–344. <https://doi.org/10.1016/j.eist.2020.10.003>
- Lankshear, C., & Knobel, M. (2016). Digital literacy and digital literacies Related papers Digital Literacy and Digital Literacies : *Digital Kompetanse*, 1(12–24), 2006–2016.
- Oktaviani, R. D., Naruetharadhol, P., Padthar, S., & Ketkaew, C. (2024). Green Consumer Profiling and Online Shopping of Imperfect Foods: Extending UTAUT with Web-Based Label Quality for Misshapen Organic Produce. *Foods*, 13(9). <https://doi.org/10.3390/foods13091401>
- Olutuase, S. O., Brijlal, P., & Yan, B. (2023). Model for stimulating entrepreneurial skills through entrepreneurship education in an African context. *Journal of Small Business and Entrepreneurship*, 35(2), 263–283. <https://doi.org/10.1080/08276331.2020.1786645>
- Pham, M., Nguyen, A. T. T., Tran, D. T., Mai, T. T., & Nguyen, V. T. (2023). The impact of entrepreneurship knowledge on students' e-entrepreneurial intention formation and the moderating role of technological innovativeness. *Journal of Innovation and Entrepreneurship*, 12(1). <https://doi.org/10.1186/s13731-023-00351-7>
- Putri, S. R., & Wardana, L. W. (2023). *The Effect of Entrepreneurship Education and E-Commerce on Entrepreneurial Intention Through Adversity Quotient in Students of The Faculty of Economics and Business, Universitas Negeri Malang* (Issue Bistic). Atlantis Press International BV. [https://doi.org/10.2991/978-94-6463-302-3\\_14](https://doi.org/10.2991/978-94-6463-302-3_14)
- Setyaningrum, R. P., & Muafi, M. (2023). Indonesia's successful women entrepreneurs: Servant leadership, E-Commerce Digitalization Adoption, self efficacy as Mediation and Adoption of E-Commerce Digitization as Moderation. *Quality - Access to Success*, 24(192), 235–248. <https://doi.org/10.47750/QAS/24.192.28>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104(March), 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Wang, C., & Kim, M. H. (2023). Impact of Education and Its Importance on e-Commerce Platforms Influencing College Students' Abilities and Performance-based Results. *Educational Administration: Theory and Practice*, 29(3), 93–110. <https://doi.org/10.52152/kuey.v29i3.904>
- Yang, X., & Luo, M. (2020). Research on the talent training mode of Application- oriented Undergraduate Cross-border e-commerce Innovation and Entrepreneurship Education. *Proceedings - 2020 International Conference on Big Data and Informatization Education, ICB DIE*, 2020, 119–122. <https://doi.org/10.1109/ICBDIE50010.2020.00034>
- Zhu, R., Liu, Z., Zhao, G., Huang, Z., & Yu, Q. (2023). The impact of institutional management on teacher entrepreneurship competency: The mediating role of entrepreneurial behaviour. *International Journal of Management Education*, 21(2), 100794. <https://doi.org/10.1016/j.ijme.2023.100794>