Mastering Disruptive Business Model in the Digital World: Blockchain Security Company

Renita Kawuryan[✉], Christie Stephanie Piar and Feti Fahmimroah

Business Administration Department, Politeknik Negeri Samarinda, 75242, Indonesia
renitakawuryan@polnes.ac.id

Abstract. The aim of this community service initiative was to investigate disruptive business models and provide updates on blockchain security company. The seminar was organized by the lecturer of strategic digital business and Youth Network Kaltim (a community for young people to get access to educational, vacancy information, networking, and collaboration). These events were held through a Zoom meeting on October 29th, 2023, at 19:30 WITA. The total number of participants is 89, which includes one speaker, one lecturer, and three members from the committee of Youth Network Kaltim. A total of 69 questionnaires were collected. This seminar employs a three-stage framework for community service: (1) agenda of a corporation involves the acquisition of resources, identification of a subject matter, and organization of event activities. (2) implementation of activities involved the completion of materials, presentation, discussion, and question-and-answer session. (3) Evaluation procedure: preservation of questionnaires by participants. The findings indicate that participant possess an understanding of the phenomenon wherein traditional business models are supplanted by disruptive model as a consequence of technological advancements. Based on the survey, 87.5% of participants showing positive feedback from the seminar. The implication is that all participants are aware about disruptive business models, the latest developments in blockchain technology and fostering innovation within the business community.

Keywords: Disruptive Business Model; Blockchain; Community Service

1   Introduction

Adapting to disruptive business models is imperative in the digital age, given that new technology and competitive threats can profoundly alter established corporate landscapes. The digital revolution has significantly disrupted traditional business practices, compelling businesses, especially those predating the Internet era, to reevaluate and revamp their strategies and operations to remain relevant and sustainable. The significance of adapting to disruptive business models lies in the uneven competition between different business models, where new entrants introduce compelling value propositions that can substantially undermine the position of existing businesses. These novel propositions often attract clients in ways that conventional solutions fail to do, resulting in a shift in market dynamics. Moreover, the digital era has triggered transformations in

five crucial areas of digitalization: consumers, competition, data, innovation, and value. Businesses must consider these factors to stay pertinent and competitive. Failure to adjust to these changes may render a business unattractive to clients or irrelevant [1].

1.1   Blockchain

Blockchain is a digital ledger technology that enables the recording of transactions across a distributed network of computers. It ensures the integrity and security of data without the need for a central authority. Each block in the chain contains a number of transactions, and every time a new transaction occurs on the blockchain, a record of that transaction is added to every participant's ledger. The decentralized and immutable nature of blockchain makes it an effective tool for secure and transparent record-keeping in various applications, including cryptocurrencies [2].

Blockchain technology has undergone significant evolution since its inception, expanding its applications far beyond the realm of digital currencies. Initially introduced as the underlying technology for Bitcoin, known as Blockchain 1.0, it primarily focused on currency transactions. The first major evolution, Blockchain 2.0, brought about the concept of smart contracts. These are self-executing contracts with the terms of the agreement directly written into code, allowing for programmable transactions that execute automatically when certain conditions are met [6].

The next phase, Blockchain 3.0, represents the expansion of blockchain applications beyond finance into various other sectors. This phase explores how the core attributes of blockchain transparency, security, and decentralization can benefit almost any context where trust and record-keeping are crucial. The concept of disruption brought about by blockchain is rooted in its ability to fundamentally alter or replace traditional systems, processes, or industries. As blockchain continues to mature, its potential to revolutionize various sectors of the economy is increasingly recognized by scholars and industry professionals alike. Despite its promise, blockchain also faces challenges such as security vulnerabilities, including smart contract bugs and the risk of attacks, which can lead to financial losses or undermine trust in the system. Addressing these challenges is crucial for the continued adoption and growth of blockchain technology across different industries. Blockchain technology has given rise to several disruptive business models across various industries: Decentralized Finance (DeFi), Smart Contracts, Tokenization of Assets, Supply Chain Management, Non-Fungible Tokens (NFTs), Decentralized Autonomous Organizations (DAOs) [5].

1.2   Blockchain security

Blockchain security refers to the measures, practices, and technologies used to protect blockchain networks and systems from various types of cyber threats, unauthorized access, and fraudulent activities. It is important because blockchain systems often handle sensitive data, financial transactions, and critical operations that require a high level of trust and reliability. Ensuring the security of blockchain networks is crucial for maintaining the integrity of the data, the trust of users, and the overall stability and functionality of the blockchain ecosystem. Without robust security, blockchain systems could

be vulnerable to attacks that compromise data integrity, result in financial losses, or undermine the confidence in blockchain as a secure technology [5].

1.3   New Job Opportunities

Blockchain security is a rapidly growing job field, driven by increased adoption of blockchain technology. As organizations embrace decentralization and transparency, the demand for experts in blockchain security has surged, creating new roles like analysts, architects, and auditors. Social science graduates can also enter this field, utilizing their understanding of human behavior, economic systems, and societal impacts. They can contribute in areas such as policy, user experience, ethics, economic analysis, research, and community management, playing a crucial role in the responsible development of blockchain technology.

The community service aims to offer the latest insights into disruptive business models, consider the example of a blockchain security company as a promising venture for the future. Moreover, learning disruptive business models is crucial for innovation, adaptability, and a competitive edge. It provides insights into market trends, fosters a customer-centric approach, and opens diverse career opportunities, ensuring resilience in a dynamic business environment.

2   Method

Community Service activity focused on studying disruptive business model initiated by the lecturer of strategic digital business courses at Samarinda State Polytechnic. Event activities were carried out by youth network kaltim: an open community dedicated to any young people in Indonesia, particularly in East Kalimantan to get access to educational and vacancy information, networking, and collaboration. Aligned with a mission to democratize knowledge, which aims to give information and networking access to young people, especially for those who are underprivileged. Activities carried out via zoom meeting on October 29th, 2023, at 19:30 WITA. The total number of participants is 95, which includes one speaker, one lecturer, and three members from the committee of Youth Network Kaltim. The background of the participants consists of 78 students in the digital business department and 10 participants from public.

There are three phases involved in engaging in community service based on Ministry of Education and Culture, as illustrated in Fig. 1 [3].
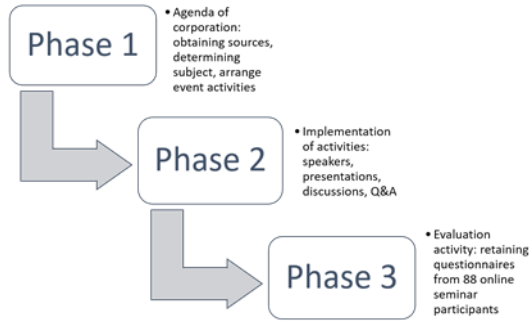
Fig. 1. Schema of Procedures

The initial phase consists of the Cooperation agenda. After acquiring sources and establishing the subject matter of topics in accordance with semester learning plans that align with course learning outcomes and the organization of activities and events.

The second phase entails executing activities in the form of lectures, discussions, and interactive question and answer sessions. The purpose of this socialization is to develop a deep understanding of how to effectively utilize knowledge of Disruptive Business Models. At this step, we distributed a questionnaire to the participants in order to assess their level of success in implementing community service and their comprehension of how Blockchain technology is disruptive, as well as their awareness of the security requirements of Blockchain.

The third phase include the assessment actions conducted subsequent to the conclusion of the event. This stage involves collecting surveys from participants in order to gather feedback from the resource individuals. When analyzing the questionnaire results, we utilize Excel as the tool for handling quantitative data. This allows us to generate data that is both comprehensible and amenable to calculations.

The survey was distributed using a Google Form, with characteristics measured on a Likert scale consisting of five categories that participants were required to select: (1) Strongly Disagree; (2) Disagree; (3) Neutral; (4) Agree; (5) Strongly Agree. Utilizing a Likert scale facilitates the analysis of respondents' answers, enabling the prediction of outcomes and the validation and derivation of conclusions (Hossein, 2020). Subsequently, participants will have the opportunity to provide feedback regarding their experience during the webinar in the final two questions. This approach allows for a comprehensive assessment of the degree of service implementation success and participant comprehension.

Once we had an agreement on the phases of the community service methodology, a specific topic was assigned for discussion during this seminar. The topic revolved around Mastering Disruptive Business Model in the Digital World, specifically focusing on Blockchain security in Taiwan. The speaker's name is MC Laras D, who holds an MBA and MA degree. She currently works as a Business Development Manager in Blockchain Security at a Taiwanese company.

3   Result and Discussion

The primary objective of these findings is to provide a concise description of the authors' observations without delving into further details. The results should specifically address the objectives outlined in the introduction, without any kind of interpretation. The description of the outcomes should be aligned with the methodology. An essential element of community service, the results segment equips youth with the knowledge and abilities necessary to examine disruptive business models. The outcomes of this seminar ought to be comprehensive and comprise novel insights that participants are eager to incorporate into their existing understanding of business model creation and analysis. The anticipated outcomes and advantages consist of gaining insight into the disruptive capabilities of blockchain technology in the context of established business models.

3.1   Critical Thinking

Critical thinking is a cognitive skill involving analyzing information, problem-solving, and making informed decisions. It requires an open mind, creativity, and effective communication. Critical thinkers reflect on their thinking, stay open-minded, and make reasoned choices based on evidence. This skill is crucial for navigating complexity and adapting to diverse perspectives in various situations. [4] In this situation, participants study science, including; Brief Overview of Blockchain and Its Potential, The Concept of Disruption, What Makes Blockchain Disruptive? Evolution of Blockchain and The need of BlockChain Security.

The outcomes of this community service are evaluated using a questionnaire administered during a seminar. The questionnaire employs a Likert scale, which is based on statements or questions, and is followed by a series of two-answer statements. Participants select the alternative that most accurately corresponds to their opinions on the statement or inquiry. The available options are as follows: 1 - Strongly disagree, 2 - Disagree, 3 - Neutral, 4 - Agree, and 5 - Strongly agree. For the analysis of community service outcomes, we employ Excel as the primary tool for managing and processing quantitative data. The outcomes of engaging in community service are presented in Table 1.

Table 1.   Participant statements about Disruptive Business Model

No	Variable	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	This webinar activity is highly beneficial for you		1.1 %	9.1%	34.1	55.7%
2	I possess a comprehensive understanding of Blockchain and its prospective impact on company		1.1 %	34.1%	40.9%	23.9%

3	I comprehend the notion of a disruptive business model		8.0%	44.3%	31.8%	15.9%
4	I grasp the factors that contribute to the disruptive nature of Blockchain	1.1 %	4.5 %	42.0%	37.5%	14.8%
5	I am knowledgeable about the primary issues associated with Cryptocurrency and the security requirements of Blockchain		4.5 %	30.7%	47.7%	17.0%

Source: Data Process

Table 1 presents participant responses to statements about Disruptive Business Models in various situations. The data, processed using Excel, reveals a distribution of opinions across a Likert scale ranging from "Strongly Disagree" to "Strongly Agree". A significant majority of participants expressed agreement with the statements, as indicated by the high percentages in the "Agree" and "Strongly Agree" categories. This suggests a positive reception and understanding of the concepts presented during the community service initiative.

The presence of a small percentage of neutral responses indicates some participants may still be uncertain about the disruptive potential of blockchain or may require further information to form a definitive opinion. The negligible percentages for "Disagree" and "Strongly Disagree" imply minimal resistance or skepticism towards the disruptive business models discussed. Overall, the data from Table 1 underscores the effectiveness of the community service initiative in conveying the importance and impact of disruptive business models to the participants. It also reflects a general consensus among the participants on the relevance of blockchain technology in shaping future business strategies.

The percentage of participants showing positive feedback from the seminar can be inferred from the distribution of opinions across the Likert scale, where a significant majority expressed agreement with the statements about Disruptive Business Models. The positive feedback is very high, with at least 87.5% of participants showing positive feedback from the seminar.

Participants also provide feedback regarding their experience during the webinar in the final two questions.

First question; In your opinion, what business industry will be disrupted in the future?

The industries mentioned as having the potential for disruption in the future by the participants include: Finance and financial services, Health and healthcare, Transportation and mobility, E-commerce, Retail, Automotive, Telecommunications, Technology, including digital technology and AI, Manufacturing, Energy, specifically renewable energy, Education, Media and entertainment.

Second question; Do you have suggestions to improve the quality of future activities? Some of the suggestions made by participants to improve the webinars included:

1. Adjusting the timing of the webinars to better suit the audience, such as avoiding late-night sessions as participants may be less active and prefer to rest.
2. Presenting materials in a language that is easily understood by all participants, suggesting the use of the local language instead of mixing it with foreign languages.
3. Encouraging participant activity and including enjoyable sessions to make the webinars more engaging.
4. Promoting the webinars more effectively to attract a larger audience.

The majority of participants provided positive feedback on the webinar activities they attended. Some participants suggested using language that is easier to understand, improving the promotion of activities, and providing interactive sessions. Some participants also criticized the technical limitations and timing of the activities. Some industries mentioned as potentially experiencing disruption in the future include finance, healthcare, transportation, e-commerce, and renewable energy.

Two photographs can serve as evidence of community work when presented. Fig. 2 displays a photograph captured during a webinar organized by Politeknik Negeri Samarinda and Youth Network Kaltim in Samarinda on Sunday, October 29th, 2023.
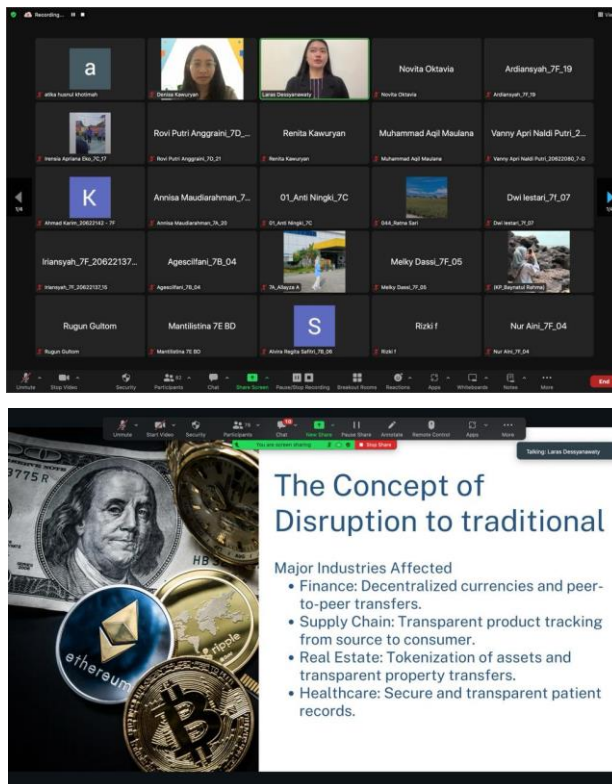

Fig. 2. Documentation in the Seminar

4   Conclusion

The seminar titled "Mastering Disruptive Business Model in the Digital World," which focused on blockchain security, was highly successful. The programme, jointly organised by the strategic digital business lecturer and Youth Network Kaltim, successfully accomplished its goal of educating attendees about the complexities of disruptive business models and the subtleties of blockchain security. The favourable response obtained from the participants highlights the seminar's efficacy in promoting a thorough comprehension of these advanced subjects.

The active involvement of the participants and their valuable input demonstrate the seminar's significance and the audience's enthusiasm to explore the topic further. This community service programme has not only emphasised the importance of innovative business models in the present digital environment but has also paved the way for future initiatives focused on exploring and discussing these crucial subjects.

References

1. D. L. Rogers, The Digital Transformation Playbook: Rethink Your Business for the Digital Age, USA: Columbia University Press, 2016.
2. S. T. R. &. I. A. Wijaksono, "Execution of blockchain in the world of archive," *blockchain Frontier Technology,* vol. 2, no. 1, pp. 64-71, 2022.
3. Ristekdikti, "Meningkatkan kualitas pendidikan dasar melalui kampus mengajar," Kemendikbud, Jakarta, 2022b.
4. P. Facione, "Critical Thinking: What It Is and Why It Counts," *Insight Assessment,* no. 1, 2015.
5. P. J. T. C. Xiaoqi Li, "A survey on the security of blockchain systems," *Future Generation Computer Systems,* vol. 107, pp. 841-853, 2020.
6. E. D. A. B. S. M. K. N. F. E. Z. K. B. Rateb Jabbar, "blockchain technology for intelligent transportation systems: a systematic literature review," *Ieee Access,* vol. 10, pp. 20995-21031, 2022.