Jurnal Entrepreneur dan Entrepreneurship, Vol. 10, No. 2, September 2021, 141–154
ISSN 2302-1802 print / ISSN 2580-9393 online

TECHNO-SOCIOPRENEURSHIP IN THE MERDEKA BELAJAR ERA

JEE
10, 2
Received, August '21
Revised, September '21
Accepted, September '21

Martinus Bambang Susetyarto
Architecture, Universitas Trisakti, Jakarta, Indonesia

Abstract: "Techno-Sociopreneurship" was actually a combination of three words, namely "technology", "social", and "entrepreneurship," which was a process of forming and collaborating between business fields with first, the application of technology as a supporting instrument and as a basis for business, and second, the application of social values as a market network that needs each other in the society. The learning of techno-socioprenership in the Merdeka Belajar era was very important to improve the mastery of attitude, knowledge, methodology, and skills. The participants were students of interdisciplinary study programs, across universities, multicultures, and different social status, which united with one goal, namely to become reliable Indonesian entrepreneurs. This research was done by library study research method. The aim was to present the techno-sociopreneurship learning model that can accommodate the combined process of courageous or brave in making decisions, trained the business instincts, system thinking: simple and fast, acting complexity management, mastering technological innovation, having social relation perspective, using modern homemade work tools, extracting material to solve problems. In techno-sociopreneurship learning, the basics of sustainability, and vice versa risk, and the uncertainty must be taught and trained continuously so that participants consider carefully in achieving a benefit or profit, and growth.

Keywords: technology, social, entrepreneurship, Merdeka Belajar

Introduction

The policy of the Minister of National Education regarding the Merdeka Belajar - Kampus Merdeka needs to be implemented to the operational level in the activities of the Tridharma of Higher Education. One of the interesting subjects to be appointed as the subject of Merdeka Belajar was the "techno-sociopreneurship" course, in which the form of learning was community service work. Various interesting things to be trained on participants were about the learning was a combination of "entrepreneurship", "technology," and "social." Lecturers must be able to facilitate the formation and collaboration process between the business sector and the application of product support technology, and the basic technology of business, as well as the field of applying social values which were market networks on digital platforms and in the market places. Therefore, the matter of learning in techno-sociopreneurship was actually very important to improve the mastery of knowledge, methodology, and skills. The learning program must be presented very attractively so that participants from across disciplines work hard to master the subject of the courses with all their energy, mind, soul and body. Their insight into the problems faced by the world of entrepreneurship in the era of industry 4.0, and later in the era of society 5.0

*Corresponding Author.
e-mail: bambang.s@trisakti.ac.id

must be widely opened. Globalization and *glocalization* (Hong & Song, 2010) of business partners, customers, and business support workers must be well understood. In addition, mental attitude development and business motivation need to be instilled since they learned to technological innovation, and do social engineering. The article actually was a scientific study that used the literature study method. The findings presented were a model of techno-sociopreneurship learning, accommodated the combined processes of courageous or brave, system thinking, acting complexity management, trained the business instincts in making decision, mastering technological innovation, having social relation perspective, using homemade modern work tools, extracting materials to solve problems that arise in the field. The basics of risk and uncertainty in achieving profit and growth were introduced early and were repeatedly reminded in the practice of business cases, especially the downturn in the business world during the Covid-19 pandemic.

Method

The method was the library study research method, a type of qualitative research method used in-depth information and data from various journal articles, literature, books/book chapters, researcher notes, news/magazines, and relevant previous research results, to obtain answers and theoretical basis for problems were being researched. Sources of data come from various articles in the literature: books, journals, newspapers, personal documents, notes, and so on. Sources of data were divided into primary sources and secondary sources. The

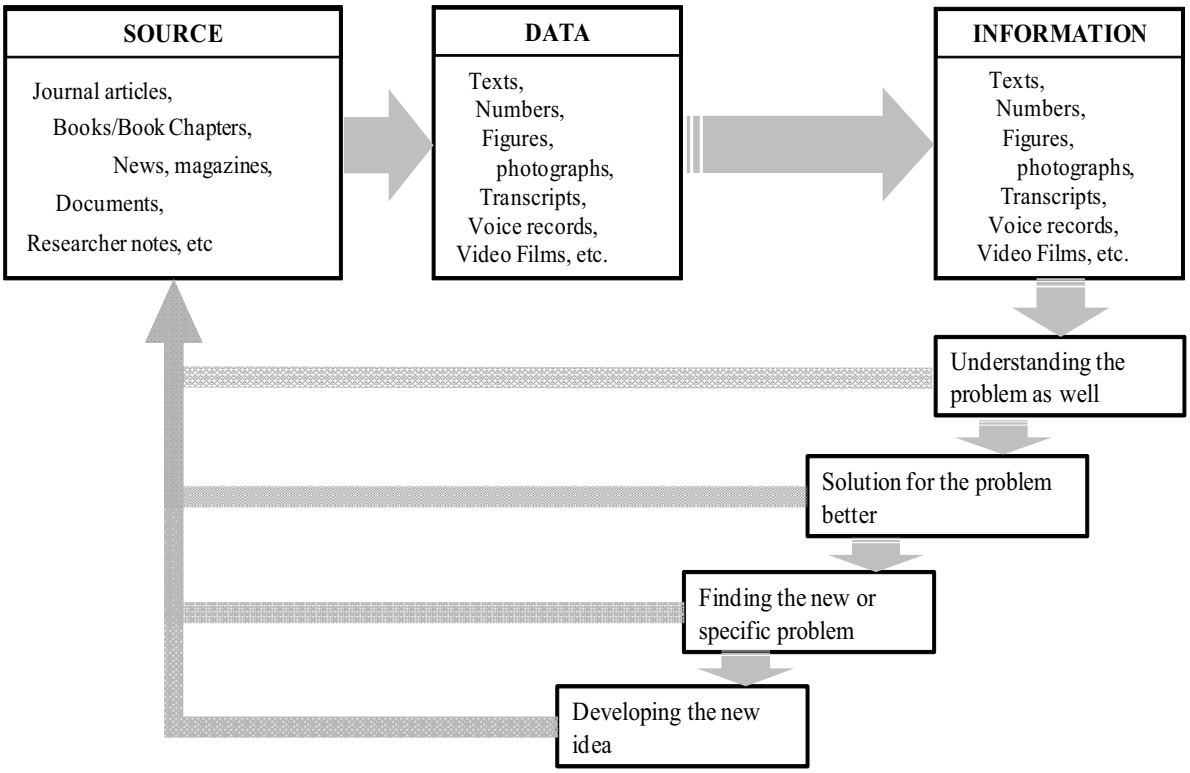

Figure 1 The Library Study Research Method
Source: Susetyarto, 2021

main characteristic of the literature study method was that researchers deal directly with text or numerical data and not with direct knowledge from the field or eyewitnesses of other events, people, or objects. The researcher used data [and information] of twenty-one articles referenced sources in conducting comprehension, text criticism, content study, analysis and synthesis. Researcher was not going anywhere except dealing directly with data sources that was already available in the library. During this Covid-19 pandemic, the literature study research method was very suitable to be considered as the right way for dissertation, thesis, or the short research. Data conditions were not limited by space and time. Researchers handled static information, meaning that it will not change because it was the 'dead' data stored in written records, such as text, numbers, images, sound recordings, films, which can be accessed every time. However, when juxtaposing data and information from various sources, the researcher studied the data in terms of its content and context. Therefore, mastery of the language used in the book or the journal was very important. So, the process of analysis and synthesis in library research methods must be careful, patient, and tolerant of the situation and condition of the author of the data source. The method was shown as Figure 1: the flow of data and information from the sources which further can be used to understand the problem, to create better solution, to find out the new/specific problem, and to develop the new idea to follow up the research conclusion.

Results

The techno-sociopreneurship business model in daily business practices may not been done by many people. Entrepreneurs usually pay attention only to one model, whether the technopreneurship model, the sociopreneurship model, or the entrepreneurship model. The integration of the three models occurred when they saw available opportunities that pass in front of them. They worked together in mutually beneficial cooperation, was called a joint operation. Joint operation (JO) was a form of cooperation between two or more companies in carrying out certain activities within a certain time (Admin Dua%RDN Rusdiono Consulting, 2021). The form of JO cooperation was introduced in Indonesia since the late 80s through the Minister of Finance Regulation Nu.740/KMK.00/1989 on Increasing Efficiency and Productivity of State-Owned Enterprises, to manage large-scale infrastructure projects, have complex socio-cultural impacts, have high financial risks, and rely on high technology. The regulation stated that every form of JO cooperation must be able to encourage the improvement of service business capabilities and the national economy. Therefore, the techno-sociopreneurship business model was formulated on the basis of theoretical and practical business knowledge, as well as skills in managing three business dimensions in a balanced way, namely the technology dimension, the social [socio-cultural] dimension, and the entrepreneurship [business] dimension. By referring to the literature study research method on the previous page, the results of the research were summarized as seen in the Table 1.

Description of Table 1. The data sources column described the data sources that contain some information needed in the analysis and synthesis process. Meanwhile, the content column explained the main ideas of articles of journal/book/news were read, analyzed, and

Table 1 The Summarized Research Results

No.	Data Sources	Information Contents	Findings	Dimensions		
				Technology	Social	Entrepreneur
1	Admin 2 | RDN rusdiono consulting, 2021	Joint Operation in entrepreneurship	Vision and mission of the business	√	√	√
	Susetyarto, 2021	Techno-Sociopreneurship Research	(knowledge and skill)	√	√	√
	Leydesdorff, 2014	synergy in triple helix relations?	(knowledge and skill)	√	√	√
2	Junaid, Rashid, and Shaheen, 2015	brand bravery: conceptualization	courageous or brave in making decisions,		√	√
	Omagor, and Mubiru, 2014	courage, purpose, & entrepreneur	(knowledge and skill)		√	√
3	Kathy Kolbe and David Kolbe, 1999	management by instinct leads	trained the business instincts,	√	√	√
	Tudog, 2021	trust your business instrict	(knowledge and skill)		√	√
4	Oma, Chirita, and Sarpe, 2012.	risk and uncertainty	sustainability vice versa risk & uncertainty		√	√
	Moriorka, and Carvalho, 2017	sustainability in business context & performance disclosures	(knowledge and skill)		√	√
5	Cusick, 2013	technology innovation methods	mastering technological innovation,	√	√	
	Zorrilla, Gracia, Velazque, Gracia, Duran, and Sevilla, 2016	technological innovation in the business competitiveness	(knowledge and skill)	√	√	
6	Crosbie, and Hickman, 2012	common business tools & technology (knowledge and special skill)	using modern homemade work tools, (knowledge and skill)	√	√	√
7	Bajus & Stašová, 2014	extraction business tools & technology (knowledge and special skill)	extracting materials to solve problems (knowledge and skill)	√	√	
8	Niemimaa, 2015	social relations perspective	having social relation perspective		√	√
	Bijker, Hughe, and Pinch, 1990	social constructions & tech-system	(knowledge and skill)		√	√
	Hong, and Song, 2010	glocalization of social work practice	(knowledge and skill)		√	√
9	Monat, Amissah, and Gannon, 2020	system thinking to business	applying practice system thinking simple and fast (knowledge and skill)	√	√	√
	Jain, Sharma, and Singh, 2020	Conceptualization, scale development				
10	Corbett, Brocklesby, and Campbell-Hunt, 2016	complexity management for a sustainable business	acting complexity management (knowledge and skill)	√		√
	Simatupang & Bajari, 2020	entrepreneurial intentions	acting complexity management (knowledge)		√	√
	Azi, 2016	CSR and employee behavior	acting complexity management (skill)		√	√

Source: Susetyarto, 2021

synthesized, to produce the findings of this research. Furthermore, it was described of the contents of each article which was arranged in a narrative manner as follows:

Risk and uncertainty (Oma et al., 2012) in the business climate, or incompatibility of partners, or uncertain socio-political conditions were challenges that they have not been able to predict. An example was the impact of commercial businesses during the pandemic era of the Community Activity Restrictions (known as *PPKM*). The risk and uncertainty of the Covid-19 pandemic will be a force majeure factor that can close their business. Entrepreneurs were reliable and tough in general had a brave mental attitude (Jain et al., 2020) in the face of all storms of risk and business uncertainty. In a situation like this, they will urge the government to issue various sectoral regulations and policies which supported a business climate that was less conducive to business and to market players, including providers of materials

and labor. Their business instinct (Tudog, 2021) automatically moved to do things that were considered urgent so that their business can survive. According to the research findings (Susetyarto, 2021) it can be seen that in difficult situations, entrepreneurs usually used operational savings methods, including extracting work tools and materials, substituting raw materials, increasing product prices, eliminating allowances/bonuses, reducing the number of workers, laying off workers, delaying bank interest payments, asking the government for a tax holiday, and so on. In the case of large-scale businesses, such methods were quite significant in their impact on the profit and loss account and production growth. The austerity measures, however, must be carried out by the company's leaders and commissioners in a humane manner. A few entrepreneurs were late in anticipating market situations and conditions, and then social turmoil with the impact of greater losses can occur. In this era of digital communication, entrepreneurs must exercise their business instincts and intuition more carefully. The term 'market' must be interpreted as a marketplace in cyberspace, which was spread across many platforms, as well as a market in the real world. Therefore, the perspective of social relations (Niemimaa, 2015) between entrepreneurs and the rapidly changing needs of the 'market' must be anticipated with the rapid adjustment of technological innovations (Zorrilla, et al., 2016) and must be studied carefully, both in the technopreneurship model and the sociopreneurship model. At a certain moment, the two models collaborated, which defined as the techno-sociopreneurship model. The introduction of the techno-sociopreneurship model should start from the assumption of normal business conditions and situations. Participants were invited to take a close look at various business activities, and to engage in internships at techno sociopreneurship companies. In the context of the pandemic, learning activities must still follow the health protocols that apply in the local area. Participants must be taught and trained with specific cases, the case of micro, small, and medium enterprises (known as *UMKM*) during force majeure conditions due to uncertainty in the business climate in the real world, or in cyberspace. In this way, participants can conclude for themselves what the distinctive characteristics of the techno-sociopreneurship model were, especially in setting the vision and mission. Did they see a collaborative vision and mission between entrepreneurial values - technological innovation - social relation perspectives in achieve a noble goal of the techno-sociopreneurship business? In the efforts of universities to foster an entrepreneurial spirit that was capable of technological innovation and was socially constructed (Junaid et al., 2015), the "Merdeka Belajar – Kampus Merdeka" policy could be a breakthrough in creating a reliable business community. If every campus raised successfully awareness of creating entrepreneurs in various fields with related technological innovation, so in the next five years reliable entrepreneurs from the "Kampus Merdeka" will appear gradually. These were supported by research of the lecturers of the Universitas Papua campus, which showed students who attended entrepreneurship training, or who were currently taking entrepreneurship courses at the Universitas Papua campus and at the Universitas Dian Nuswantoro Semarang showed that the participants instrumentation readiness variable have a significant effect on entrepreneurial intentions. Eventhough, variables the need for achievement, and self-efficacy had no

effect (Simatupang & Bajari, 2020). From the research findings of the literature study and the researcher's notes on the experiences of several entrepreneurs, it was stated that the principles of techno-sociopreneurship were as follows (1) entrepreneurs must be courageous or brave in making decisions, (2) entrepreneurs must be trained in their business instincts, (3) entrepreneurs must think about the sustainability of their business, and vice versa they must take into account risk and uncertainty, (4) entrepreneurs must master technological innovation, (5) entrepreneurs must use modern homemade work tools, (6) entrepreneurs must extract materials to solve problems in the field, (7) entrepreneurs must have a social relations perspective, (8) entrepreneurs must apply practices of systems thinking, (9) entrepreneurs must apply acting complexity management.

Discussion

There were nine findings from the process of literature study which were adopted as the principles of the techno-sociopreneurship model. It was explained chronologically and interrelated, namely:

1. Courageous or brave

The main capital for a person to become an entrepreneur was courageous. This talent for being brave was usually seen from toddlers, teenagers, up to adults. Courageous was expressed usually as an act of children who were playing. Some of them were playing more reckless compared children who were playing on the normal rule. Courageous can also be trained to people who had brave talents but their talents were not well developed. Such a person had limited space for freedom of expression in his childhood. Perhaps, there were situations in the family that worry about the behavior of the brave child, or the activity was categorized as hyperactive, which was considered dangerous, so restrictions or even prohibitions were made by the parent. Courage basically must be understood as the psychological ways person used energy, five senses, soul and body to achieve goals. Courageous based on motivation to achieve that goal was called entrepreneurial courage (Omagor & Mubiru, 2014).

2. Business instinct

The business instinct of an entrepreneur was a matter of "feeling" about the right business steps to take and the right time to do them. Regarding the "feeling" that was subtle, sensitive, and sharp in calculating risk and minimizing uncertainty, entrepreneurs needed to train their instinctive sensitivity, patience, and peace of mind. Business instincts were trained by playing the right brain to be able to serve as a guide when making the right decisions. An untrained business instinct or a fearful heart to run a business can lead to lost business opportunities, or even paralysis of the decision-making process. Actually, the business instinct was getting better, if the entrepreneur was passionate, rejoiced in life and work, had a trusted partner, and had a success story in the past. In managing the techno-sociopreneurship business, creating team solidity was a problem that must be worked on efficiently. There were people who liked the instinctive approach, but there were also those who prefered the "the right man on the right place" approach. Everyone did not want 'favoritism' in forming a team, but chose a system of achievements and career paths. In fact, letting the climate change instinctively can have a negative effect on the work

environment, and retention became a wider company problem. Keeping the team intact — survive together — was very dependent on the ability of leaders who had a quick sense to solve management problems. Although management skills can be taught as needed, but the practice of management using instinct will not change directly. Therefore, in the subject of techno sociopreneurship learning it was necessary to teach people the best way to utilize their natural abilities to be more effective, more able to achieve the goals, and increase productivity levels. Instinct-based management was not a vision for the future. Management must be based on research that was in accordance with the methodology, and the findings were open to criticism before being applied by the company leadership. A good leader will not be afraid of change, but will take advantage of opportunities for a better future. Successful leaders can control changes by giving people the freedom to work professionally according to the power of their knowledge and instincts (Kathy Kolbe & David Kolbe, 1999).

3. Sustainability, and vice versa risk and uncertainty

Business sustainability (Morioka & Carvalho, 2017) was an important part to show that business management has been carried out in a professional manner. Corporate sustainability can be interpreted that the business has profits and growth in accordance with the expected targets. In addition, it can be concluded that the company has been running on the right track, in accordance with the company's vision and mission that has been set. Companies that were getting bigger in their interest were implementing practices related to sustainability to reduce risks and increase business opportunities in the future, or at least to survive in the event of business uncertainty. In this context, performance indicators that were in line with sustainable business development were very important to be supported by managerial and operational decisions. Therefore, an annual evaluation of aspects related to the company's sustainability performance was required. Perhaps, special research needed to be done to analyze the development of social and environmental initiatives within the company's business, analyze the sustainability indicators that occur, and highlight the challenges ahead in business sustainability issues. On the other hand, entrepreneurs must still consider risk and uncertainty as threats to company performance that can occur at any time. Referring to two things that management analysts should be aware of, namely sustainability, and vice versa risk and uncertainty. In the future business sustainability research it was proposed to use the GRI (global reporting initiative) indicator, which can be the basis for initial discussions (LeGuin, 2013).

4. Technological innovation

The development of technological innovation (Cusick, 2013) in the world in the last fifty years was very fast. The products resulting from these technological innovations were in tight competition, not hampered by ways of trade isolation, or acts of unfair competition. Technological innovation certainly was as the result of research development, which referred to the desire of the academic community to solve the problems that surround their people. This kind of applied research activity was considered as a process for dealing with and solving problems that focuses on the market and its various agents. The research also involves an exchange of theoretical knowledge and practi-

cal knowledge that really can be used in the techno-sociopreneurship learning model. For instan, the knowledge of management of appropriate technology in countries with limited economies of scale was one of the keys to success in the techno-sociopreneurship business today. Technological innovation can be generated internally through campus academic research, or can also be obtained/imported from abroad. Therefore, in order to companies to achieve and maintain technological advantages that support their products, and enable them to compete in the free market, companies must maintain a position of market dominance by means of their own research and development. However, in fact, with the advancement of information system technology and computer science technology, the research partnerships for product development can occur across countries, across disciplines, and across socio-cultures. Competition in terms of technological innovation has become very open, with the provisions of cooperation created between researchers (inventors) and users of technological innovations (companies) who were able to finance research up to the industrialization process, or companies simply will buy their research patent. All those things can happen because the acquisition of technological innovation offered in the marketplace is accessible to any competitors, and therefore the government should be taken into account those mutually situations (Reguia, 2014). Technological innovation was now a symbol of progress and business competitiveness which was only short-lived. Digital communication technology innovation in the digitalization era has even become an interesting business field in the world of information technology. Product price competition becomes relatively fast and very profitable for consumers. However, a nation that was left behind in the competition to find products needed by its owned people became a nation that uses innovation products from foreign countries. In turn, a country's economy will be dictated by outside innovators, and income and employment pathways were highly dependent on producers. Therefore, the policy of "Merdeka Belajar-Kampus Merdeka" breakthrough was expected to awaken the atmosphere of researchers to increase competitiveness as a way for the Indonesian state to produce its own goods and services, for national needs, pass tests on domestic and international markets, and had an impact on increasing the real income of the working people or the company's profit in the long run. The topic of technological innovation in science, engineering, and social sciences related to economic development and growth was an interesting field with highly applied considerations and results. The invention of the mobile phone, for example, was a very lucrative patent in the history of technological development and has generated a massive revenue stream for more than a century. Other companies that replicate these products also have the opportunity to develop product variants. Of course, they worked on the basis of cross-disciplinary research within the organization that can encourage the birth of new products or their substitutes and must make a profit. The techno-sociopreneurship actually recommended entrepreneurs to work innovatively, based on research and tested by the market in order to generate income for the people and the country on a larger industrial scale. In management there was an innovation method based on costs, as mentioned in the article Bogdanoiu, Popesko, and Tuèková called the Activity Based Costing (ABC) method. In this method various informa-

tion about costs, operations, activities, outputs, and cost objects were shown clearly. This method was usually used to calculate costs, because of the characteristics of the tools used and the characteristics of management that seek to optimize operational costs. The ABC method (Bajus & Stašová, 2014) can be characterized by three innovations, (1) First innovation: Setting costs for activities, which were based on the measurement of resource consumption. Knowledge of activity costs was an important resource for identifying assets with high potential for cost reduction activities, (2) Second innovation: Assigning costs to cost objects based on media activities that accurately measured the consumption of those activities. The media usually referred to its cost measurement on the consumption of activities, (3) Third innovation: Improving the quality of information related to information activities that were not developed about how activities are carried out. The factor that determines how much power range was needed to carry out communication and information activities. In this case, the achievement indicators were called performance indicators. In this way, the ABC method combined nonfinancial and cost information for the benefit of management and to improve business performance.

5. Using modern homemade work tools

The use of business devices, which were lagging in technology usually lead to high costs. However, on the contrary, the use of modern tools with imported technology can also lead to high costs, if the supporting infrastructure facilities have not been prepared. Therefore, the purchase of modern work tools for small-scale business and industrial activities, such as UMKM, for example, sometimes causes a waste of energy, or high maintenance costs. Therefore, it was recommended that in the future the manufacture of own tools that suit the needs and scale of techno-sociopreneurship business management will have a better impact. However, the research costs for the invention of the tool until the tool was produced are sometimes quite fantastic. Perhaps, the price of the resulting product did not raise the cost of production from the research to the industrialization. That was why entrepreneurs often import tools to support their products rather than making their own modern tools. Moreover, regarding the award for intellectual property, the findings of the tool were still not significant to be able to replace production costs. In other words, the use of homemade and modern tools may be an unattractive, expensive, and in touch with the interests of the business of similar tools, which were carried out by entrepreneurs of imported work equipment. However, if the government's political will and the state's alignment with the use of domestic goods were more real, including the appreciation for inventors, it was more appropriate to use modern tools made by the nation itself to support industry and business, and therefore the techno-sociopreneurship model can be realized. In fact, the cooperation program between ASEAN and the Australia Development Program Phase II has been running to help realize the training, as documented in the Trainee Manuel Book: Use common business tools and technology (Crosbie & Hickman, 2012).

6. Extracting materials to solve problems

Extracting the main ingredients or supporting production usually occurred due to three cases of delays in the supply of raw materials, raw material products disappearing from the

market, and the occurrence of natural and non-natural disasters such as the current pandemic. Entrepreneurs usually carried out activities of substituting raw materials, or reducing the volume of raw materials, but they were sold at the same or lower product prices. Extraction of materials was usually carried out immediately if the need for the resulting product was considered very urgent, or was needed by many people. For example: in the case of the scarcity of soybeans as an ingredient for making tempeh. With a simple and fast thinking system, entrepreneurs solved problems whose results can be easily measured. Other aspects, such as: compliance with regulations, commitments, and business ethics were sometimes violated. Example: doubling of low quality products (known as KW) for building materials, and other materials. In fact, the real extraction method has occurred during this pandemic where the choice to substitute, or replace suppliers, or made other products, or grew their own food products was very limited choice, and even called no choice. For example: in the case of procurement of Covid-19 drugs and vaccines. If it was associated with the ABC method extracting materials to solve real business problems was included in the first method of innovation by making changes to raw materials, or production support materials. By observing the ABC method (Bajus & Stašová, 2014) where new products that occur were set with accurate product prices, cost analysis caused each product to change, and optimization efforts. The product price was calculated accurately according to all relevant overhead costs in the context of the extraction and the actual logical consequences experienced. The ABC method also followed costs related to customer demand, suppliers, distribution, transportation, manufacturing, operational and security processes, management processes, and other business activities. The ABC method saw the company's efforts to extract as a complex work with high activity, and there were processes interrelated with other products. The ABC method can therefore calculated a more precise cost for the extracted product.

7. Social relations perspective

Understanding the social and cultural behavior of the community was the seventh principle that was no less important in relation to building business cooperation with its employees, with the community around its business location, with the community that was the market target. Understanding socio-cultural characteristics will be increasingly difficult in this digitalization era. Communication with the business community in cyberspace will be difficult to achieve, because entrepreneurs never knew how the real socio-cultural behavior of the community was, whether they were customers or not, they were community competitors or just buzzers who can disrupt product goals. According to the Center for Innovation Policy and Governance (Esti et al., 2017) buzzer was an individual or account that had the ability to amplify messages in ways that attract netizens' attention or build conversations with netizens, or fake accounted under its control, then worked with certain motives to trick official accounts or real customers. Buzzers usually had a wide network to create content that was contextual, persuasive enough and driven by certain motives, including economic or political motives. Therefore, the work of building social relations in the techno-sociopreneurship model in the future must involve an information system (IS) organization in charge of mitigating and recovering information or incidents, if the market and the government as regulators require it. Of course, IS organizations will work assisted by

artificial intelligence systems, machine learning, in a reliable big data capacity. Increasingly, the importance of social behavior for business continuity must be recognized by IS. By doing so, the relation between social relations perspective and business sustainability could be theoretically analyzed, and on top of this analysis entrepreneurs could make smart and fast decisions. In addition, the perspective of an entrepreneur's social relations in terms of understanding the behavior of workers, especially labor-intensive workers in Indonesia, must be more sensitive. This era of democracy opened up opportunities for relations between workers, employers, and the government to be proportional. Employees became one of the most important stakeholders of a business organization. They can be influenced by and also affect the activities of their organization. They played a key role in the success or failure of their companies' business organizations. That was why employees tend to be affected by CSR programs and react differently in their respective workplaces as long as justice, or more precisely, economic enjoyment has not been obtained (Azi, 2016). Therefore, workers' organizations and company managers should be involved and took responsibility for solving social problems, especially problems around their workplace or technological problems needed by families, members of the workers' organizations, and communities affected by business activities around their place of business.

8. Systems thinking: simple and fast

The entrepreneur's system of thinking was simple and fast. They always prioritize solving problems in the field to achieve their business goals. They even wanted the practical application of systems thinking to business (Monat et al, 2020). If it was based on this theoretical concept, then the question was how to teach this simple and fast system of thinking to participants in the techno sociopreneneurship course. Research results from Simatupang, R.A. and Bajari, M. (2020) showed that instrumentation readiness had a positive effect on entrepreneurial intentions, while needed for achievement and self-efficacy had no effect. This meant that research respondents thought entrepreneurially: simple and fast. They did not feel the need for achievement and self-efficacy variables for the near term. They saw no further correlation of need for achievement and self-efficacy as a significant effect on the market, and on business goals. Therefore, in teaching systems thinking: simple and fast to participants of the techno-sociopreneurship course, insights into achieving long-term goals that can have an impact on business sustainability, as well as economic, social and environmental sustainability must be introduced strongly. The techno-sociopreneurship entrepreneurial model was actually an entrepreneurial model in any field that had technological innovation, had a social relation perspective, which was organized with a simple and fast thinking system. However, this method did not mean that techno-sociopreneurship entrepreneurs ignored the values of sustainability. These issue had been written in the book of the social constructed theory in technological systems, as taught by Bijker, Hughe and Pinch (Bijker et al., 1990).

9. Acting in complexity management

Acting in complexity management the ninth principle discussed was acting on complexity management. Every entrepreneur was well aware that the entity of their life was very complex. However, in systems thinking should be simple and quick to act or take execution, if there were

problems in the field. Research of complexity management for a sustainable business (Corbett et al, 2016) at a New Zealand company showed that entrepreneurs worked in complex systems. They used two lenses to interpret the evolution of managers' competitive capabilities and the formation of a coherent manufacturing strategy simultaneously. Meanwhile, they acknowledged that the cognitive model of directed action in the coordination of manufacturing and resource activities can improve the competitive 'fitness' of firms. Accurate cognitivist representation of the outside world is a requirement for sustained success in the cognitivist view of corporate evolution. This research demonstrated the scale and complexity of the entrepreneur's task in developing the interdependent networks of internal and external coherence that were necessary for sustainable success in the global marketplace. This achievement went far beyond the cognitive abilities of human labor managerial agents. They concluded that entrepreneurial organization was the most consistent cognitive system with the self-determinism of autopoiesis theory. Autopoiesis can be interpreted as a system which was able to organize, form and reproduce itself independently, and was able to form its own structure as a reaction to environmental disturbances to continue the autopoiesis process in its sub-systems. Thus, in its ability to act simply and quickly in the complexity of management, the entrepreneur was actually the only entity capable of generating coherence at the scale of action required, encompassing the entire portfolio of external resources, capabilities and dependencies, decided by a single action which was measurable.

Based on the results of the research and discussion, a techno-sociopreneurship learning model was developed as Figure 2.

Description of Figure 2. It was shown that the techno-sociopreneurship learning model was represented as a set bounded by a red dotted line. The model was a combination of three well-known business models, namely the entrepreneurship model (yellow color), the technoprenership model (blue color), and the sociopreneurship model (brown color). The three models were entities with independent management systems, al-

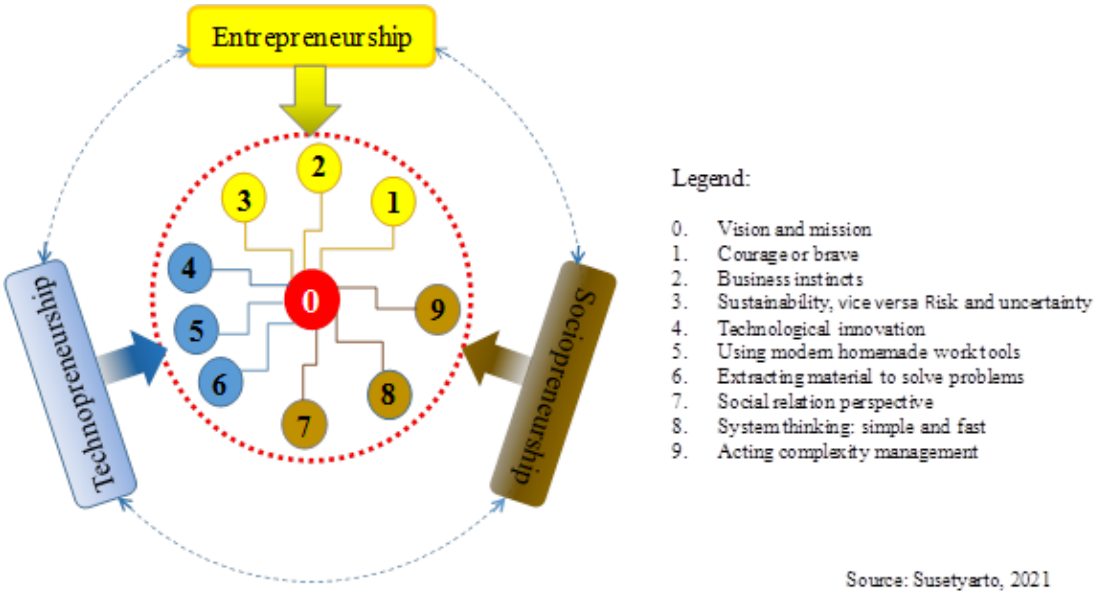

Figure 2 The Techno-Sociopreneurship Learning Model

though there was a complementary connectivity to one another. At a certain moment, coordination of the three management systems was needed so that they can be more intensive to achieve a common business goal, and were mutually beneficial for the growth of their respective businesses, as well as useful for national growth. For optimum synergy, a portfolio of each company was needed, as well as a track record of partnerships that had been carried out to be considered in deciding to synergize with a certain time, as a synergy in triple helix relations (Leydesdorff, 2014). Furthermore, the synergy agreement in the techno-sociopreneurship model was written on the agreement sheet (known as the MoU). In the MoU, it was agreed what the Vision and Mission were, what were the short, medium and long term goals or targets, which were shown as zero icons in a red circle. From the agreed vision and mission, it was elaborated or connected systemically into nine icons which are the principles in techno-sociopreneurship, as mentioned in the Legend icon number 1 to icon number 9. This matter was illustrated as the relationship in the computer system between the center controllers with nine control receiver units. However, in the description of the cooperation, job descriptions must be written so that it can be realized in a systematic detail of management activities, with clear performance measures and easy to see the benefits for many parties.

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