

# Indonesian Higher Education Institution's Strategy toward Disruption with Implementation of Infinite Games Mindset

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**Abstract:** Disruption era had affected to every sector, including higher education sector. Between 2015 and 2019, more than 130 private university were closed for a different of reasons. Basically, they are not ready to face the change. Innovation disruption created new situations, thus created new demand while destroying prior situations. Many businesses collapsed suddenly because they are not aware of the inflection point that suddenly destroys the business model that has been run for years. Nevertheless, the current situation gave hints to new thoughts, including the development business model called infinite game theory. This paper examined how strategic inflection points can have occurred in the higher education sector and the infinite games model can be an alternative strategy in order the higher education sector withstand disruptive innovation era.

**Index Terms:** Disruption, Infinite games theory, Strategic inflection point, Games and Minset.

## 1. Introduction

Today's business, the term disruptive innovation is often mentioned. Disruptive innovation itself is a situation that creates a new market, where its creation caused damage in the existing market and will eventually replace the total of the previous technology. Disruptive innovations often create products and/or services that are unexpected but later accepted by the market and create different demand and consumers. It was introduced by Clayton M. Christensen and Joseph Bower in 1995 which ultimately led him to create a theory and model of disruptive innovation [1].

Disruptive innovations are often not realized in large companies that tend to underestimate the small changes of a newly growing company. There has been a lot of destruction of companies such as Toys R Us as a giant in toys industry that filed bankruptcy, Kodak who was caught off guard by the arrival of digital photography to then be crushed, and Blockbuster which took the streaming film industry lightly to later fall to Netflix business model, and many other examples[2,3]. One of the common mistakes that occur is the result of the unconsciousness of the leaders of large companies to the existence of Strategic Inflection Point. The strategic inflection point is a large inflection point that has tens of times the power of ordinary change. This is associated with current technological disruption [4]. This change will change the exponential mapping of business models that impact very difficult or even impossible for a company to run the business model it normally runs. Important case in this problem was the computer industry in the era of 1980-2000, where computer and technology companies ran business models vertically, big company such as IBM did everything themselves from production to sales. Until the early 2000s where technology companies focused on hardware and software production, while retail companies focused on sales. In this case IBM was not ready so they were eliminated from this business [5].

To avoid this to be happened again, six industrial forces had to be carefully watched according to Andrew Grove, former CEO of Intel, once said five are porter's five forces power model, namely business competition, newcomer threats, substitution product threats, buyer bargaining power, and bargaining power of sellers[6]. Grove added another one that is the strength of complementary companies, namely companies that complement each other in creating value for customers. The positions of these complementary companies can change to eat into each other when one of them decides to produce their own goods that they did not initially produce. The essence of Grove's statement in his book is The Greatest danger to an inflection point is standing still [4].

Simon Sinek introduces a new thinking about the approach of game theory in business, namely infinite games in his book where a business model is like an infinite game, unlike games that exist eventually, such as sports matches. Many people realize that business is something that is (expected) infinite, or sustainable (sustainable), but unfortunately, the mindset of the people is actually finite (limited)[7]. Here's what to look out for because this becomes interesting when the approach is carried out on business models in the higher education sector in Indonesia.

The world of education, especially higher education today is no exception that affected by disruptive innovation. Many universities, especially private universities, are unaware of the huge changes in the industrial era 4.0 so they unwittingly fall behind to death. Between 2015 and 2019, 130 private universities were closed by the Ministry of Education. The highest number of private universities that were closed are 79 occurred throughout 2019[8]. The main reason was the lack of student bodies. This happened, because of many factors, including miss-management to unwilling of prospective students to enter the college. Dorri is one of the views that thought about the importance of the need of specific business model in education area, because it classified as social service organization, either they run by government or private sectors [9]. Ministry of higher education has responded in order to face digital disruption through digitalization in most aspects in higher education such as one database for all activities called Pangkalan Data Pendidikan Tinggi (PDDIKTI) or Indonesian Higher Education One Database System [10]. In early 2022, They launched several new platforms to support digital transformation in higher education that used AI and Single Sign-on (SSO) platforms in every application launched [11]. Not many realized that higher institution such as universities and institute run by private sector need to think in business way. Because of that, not so much research has been done before, especially about the implementation of porter's diamond strategy and infinite game strategy in higher education. In order to survive private universities, have to realize the disruption and then tried to modify their strategies in order to survive.

Based on the problem explained, author would like to propose the research questions as follows:

1. How the private universities became more difficult to survive?
2. How the Strategic Inflection Point become a threat in higher education especially in private university?
3. How infinite game strategy can be implemented in higher education especially private university sector to face disruptive innovation era?

To answer the questions, this research purpose some answer as follows:

1. To find out the cause of difficulty to survive for private universities
2. To find out the Strategic Inflection Point in the higher education sector
3. To find out how the implementation of infinite game strategy in higher education sector

## 2. Literature Review

### 2.1 Disruptive Innovation

Disruptive innovation is innovation that helps create new markets, disrupt or damage existing markets, and ultimately replaces previous technologies. Disruptive innovation develops a product or service in a way that is unexpectedly marketed, generally by creating different types of consumers in new markets and lowering prices in old markets [12].

The term disruptive innovation was first coined by Clayton M. Christensen and Joseph Bower in the article "Disruptive Technologies: Catching the Wave" in the journal Harvard Business Review[1], [12]. The article is actually intended for executives who determine the funding and purchase of a company with regard to the company's future earnings. Later in his book "The Innovator's Dilemma", Christensen introduced the Disruptive Innovation Model. Where the customer's ability to take advantage of something new in one line. Where the lowest line is the customer who quickly satisfied and the highest is described as a demanding customer. The distribution of these customers that in the median can be taken as a dotted line to implement new technology.

In his book, Christensen explains that there are two main types of disruptive innovation[1].

1. Lower Class Disruption: This disruption is a situation when a small new company enters the market with an initial target of lower-end buyers who are not usually noticed, by offering products whose products function more appropriately for them and at a cheaper price. This opportunity exists because there are large companies tend to focus on the most profitable customers, by providing products and services whose value continues to be added, while customers who are considered less profitable are more often overlooked. As a result, they only produce products at prices that are out of reach and do not meet the needs of the lower market. Therefore, there is an opportunity for new players to work on the lower class market.
2. New Market Disruption: This disruption is a situation where new players are present and focused on emerging markets, whose scale is still too small to be noticed or by large companies. This often happens in things that are non-consuming (when they succeed in changing the previous consumer). The technology that becomes a service tool for this emerging small market is often still not perfect and in accordance with standards, so it is ignored by the main customers.

Several researches had been conducted such as paper by Shrivastava and Krishnamoorthy that explained about disruption in distribution and inventory planning under supply chain in transportation area [13]. Other article written by Wang, et. Al stated the relationship between managerial digital attention and firm digital innovation in term of governmental digital initiative[14]. In healthcare, Bellucci came out with his findings about technology disruption in term of the usage of AI and Clinical Decision Support System, cohesive management of data, and the use of analytic software as one of the major issues facing healthcare leaders today. Other paper in educational area, several researchers resulted the innovation strategies in academic libraries using disruption innovation theory by Otitke, Barat, and Kiszl[15]. Thompson and Miller even examined about disruptive trends in higher education [16] that their research supported by Avelar, et. Al and Cottava et. Al about Education advancement and sustainable development goals in higher education institution[17,19]. Other research examined about innovation change in higher education to face digital transformation has been conducted by other reviews for example to manage lecturer's competency [20]. Besides that, technology readiness index believed as one of important factor throughout digital transformation in higher education [21].

## 2.2 Porter's Five Force Models

Porter's five forces analysis is a framework for industrial analysis and business strategy development developed by Michael Porter of Harvard University's School of Business in 1979. According to him, there are five forces that determine the intensity of competition in an industry, namely (1) the threat of replacement products, (2) the threat of competitors, (3) the threat of new entrants, (4) the bargaining power of suppliers, and (5) consumer bargaining power. This analysis is usually done in combination with SWOT analysis (Strength, Weakness, Opportunity, Threat). The following is a five-strength analysis model introduced by Porter[6,22].

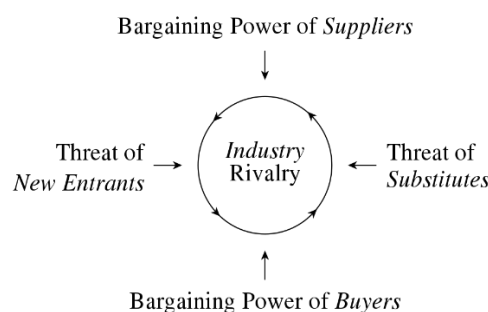


Fig. 1. Porter's Five-Strength Analysis Model[11]

## 2.3 Game Theory

Game theory is a part of the mathematical science that studies interactions between agents, where each strategy chosen will have different outcomes for each agent. It was first developed as a separate branch of mathematics by Oskar Morgenstern and John von Neumann. Game theory is defined as a general analysis of interaction strategies. Game

theory focuses on determining the optimal strategy where each decision maker takes decisions rationally and tries to read each other's strategies[23].

The object in the study of game theory is the game itself. The game in everyday life is a competitive activity where players compete against each other based on a set of rules. A game is a competitive activity played by a number of players, has a set of strategies, and has results that quantitatively describe the outcome of a number of games in terms of winning or losing. The strategy that each player uses can be very complicated because the strategy is determined from the beginning of the game. The strategy describes what the player will do in every possible situation [24].

Some definitions in game theory are as follows[23,25]:

1. *Game*

The object of game theory studies is the game itself. The game is a formal model of an interactive situation in which at least one player can maximize its utilization in response to the actions of other players. A game is played by two or more players, but some require only one player (a decision-making game).

2. *Players*

It's the players involved in this game.

3. *Strategy*

Strategy is a series of movements or steps followed during the game to achieve the goal.

4. *Payoff*

In a payoff game is a number that describes the 'motivation' of the player. Payoff can be either profit or declare the count of wins and losses.

5. *Information Set*

It is a set of information that each player has. The game can contain players with perfect information, imperfect information and players with complete information. Players with perfect information know all the events in the game including the opponent's movements, while players with imperfect information only know some of the movements that the opposing player has made. Players with complete information refer more to players who know the strategies and payoffs available, but do not require knowing the moves that other players have made.

6. *Equilibrium*

It is a condition in which all players have picked and taken their respective decisions and achieved their outcomes. There are many game theories, but in the business and economic world, this model makes an economic revolution by solving difficult puzzles about the behavior of economic actors. Market participants use this model to determine which products should be terminated and which should be further developed. Decisions about competitive pricing and which marketing strategies to use are also inseparable from the use of this model. Economists use game theory to understand the behavior of oligopolies. Game theory also plays a role when you want to find solutions to unhealthy competition and imperfect markets. In addition, there are several types of game theory, one of the most commonly used is kooperatif vs. non operative game theory. Cooperative game theory is used to see how coalitions or cooperative groups interact when only the rewards are known. Non-cooperative game theory is used to see how rational economic agents agree with each other to achieve their goals.



Fig. 2. Game Theory Models

## 2.4 Infinite Games

Limited games, such as soccer or chess, have players, fixed rules, and clear endpoints. Winners and losers are easy to identify. In unlimited games, such as business or politics or life itself, players come and go, the rules can be changed,

and no endpoint is determined. There are no winners or losers in unlimited games, only in front and behind. For those of us who adopt an infinite mindset of building stronger, more innovative, and inspiring teams, organizations, careers, and lives. In the end, those who live with an infinite mindset are the ones who lead us all into the future.[7]

The characteristics of leaders who have an infinite mindset consists of 5 main factors, namely[7]:

1. *Advance a "Just Cause"*

"Just Cause" is the main reason (justification of the cause). Sinek believes in the importance of Starting with Why. The difference between Why and "Just Cause" is that "Just Cause" is visionary and aspirational. A major reason or "Just Cause" is a reason for you, your team, or business to exist. The main reasons must have the following characteristics:

- a. For something - affirmative and optimistic
- b. Inclusive and open to all who want to contribute
- c. Service-oriented and "other focused"
- d. Resilient and able to bear political, technical and cultural changes
- e. Idealistic and courageous, but ultimately achievable
- f. Leaders should write "Just Cause" and make it their primary goal clear. Being the best in the market, achieving growth, or being socially responsible does not fall into the "Just Cause" category.

2. *Build trusting teams*

Leaders in the infinite game realize that team culture comes from values and behavior. An example is the military, where low- to medium-performing but trustworthy teammates are rated superior to those of high-performing counterparts but rated low on a confidence scale.

3. *Study Worthy Rivals*

Worthy Rivals are other players in the game that will benefit you to learn and learn. They can be in your industry or outside of it, the key is they help us get better at what we do.

4. *Prepare for Existential Flexibility*

Existential Flexibility as "the capacity to initiate extreme disruption to a business model or strategic course to more effectively advance "Just Cause". Infinite-minded leaders who see that their current path limits a team's ability to achieve "Just Cause" must adapt. They need to be flexible even if it means abandoning or disrupting their existing business model.

5. *Demonstrate the Courage to Lead*

The ability to set an example of courage in leading and making decisions. Few have the courage to change from a limited mindset to a more infinite mindset. Great people stand together with deep trust and "Just Cause" together. Courageous leaders know that they don't have all the answers and will never have complete control. They are willing to do what is right, even when it is more difficult.

Reza Ghiabi, an entrepreneur from Iran and keynote speaker in his seminar delivered what is known as the finite matrix and infinite games[26].

1. Finite players versus Finite games or most Finite players – in this case, finite players, must know the rules and practice to win the game.
2. Infinite players versus finite games or most players – in this case, infinite players, have the potential to become finite player leaders to change the rules of the game to go beyond winning and losing and make the game about something bigger, like the example given above.
3. Finite player versus Infinite game or the majority of Infinite players – this scenario is frustrating for finite players because they usually expect the game to end but come out when he runs out of resources.
4. Infinite player versus Infinite game or most Infinite players – this case is an ideal scenario for the player's progress because the player's goal is to perform better than what he did before, and the game provides a platform for the player to practice.

Higher education as infinite games has been stated from research conducted by Harre, et. Al that suggested higher education institution should keep infinite games alive because of four reasons, i.e the responsibility to be 'critic and conscience of society', the dilemmas of being a woman with leadership responsibilities in an institution, the opportunities as teachers to teach and then be taught by the students, and the contradictions as scholars in audited research personas[27]



Fig. 3. Finite Matrix and Infinite Games

### 2.5 Strategic Inflection Point

In mathematics, the point of inflection is where the curvature of a function changes its direction, either from concave to convex or vice versa. In the real world, any important event that dramatically changes the trajectory of a business, industry, or economy can be considered an in point of change. A strategic in point of change is a major change in the competitive environment that requires a fundamental change in business strategy. A business may end up with growth or decline from a strategic in point of change, depending on whether the business can adapt in a timely and appropriate manner to change.

The Inflection Point was introduced by Andy Grove, former CEO of Intel Corporation, which refers to any major changes taking place in a competitive environment that require fundamental changes in business strategy. As a turning point of the trajectory, a strategic in point of change can be an opportunity to achieve further business growth or early fall. Businesses may face completely different fates in changing the same market environment. The results depend heavily on the strategic decision-making of the executive team. More proactive and timely adaptation to change in a competitive environment is more likely to produce positive results. Failure to recognize the point of change or reluctance to change often leads to irreversible business decline.[4]

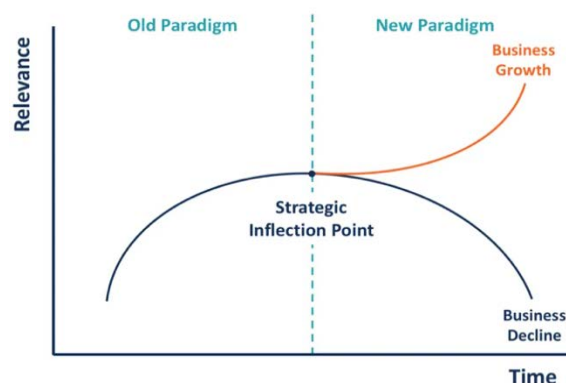


Fig. 4. Strategic Inflection Point Diagram

### 2.6 Management of Higher Education

To manage and organize higher education sector in Indonesia, the government has been issued several laws as follows:

1. Law No. 20 of 2003, about National Education System.
2. Law No. 12 of 2012 about Higher Education section
3. Government Regulation No. 4 of 2014 about the Implementation of Higher Education and Management of Higher Education.
4. Permendikbud No. 3 of 2020 about National Standards of Higher Education
5. Permenristek Dikti No. 62 of 2016 about Higher Education Quality Assurance System.



Higher education organizers, especially for the private sector, namely private universities today must pay a lot of attention to the complete revamping. This is inseparable from changes in government regulations and policies, especially through the regulation of the Minister of Education and Culture (Permendikbud) no. 3 of 2020 on The National Standard of Higher Education in article 18 alluding to the policy of freedom of learning [28,29].

To prepare students for social, cultural, world of work changes and rapid technological progress, student competencies must be prepared to be better prepared with the needs of the times. Link and match not only with the industrial world and the world of work but also with a rapidly changing future. Universities are required to be able to design and implement innovative learning processes so that students can achieve learning achievements covering aspects of attitudes, knowledge, and skills optimally and always relevantly. Learning process in Merdeka (freedom) Campus is one of the embodiments of student-centered learning that is very essential[28].

### 3. Research Methods

#### 3.1 Research Framework

Below is framework in this research



Fig. 5. Research Framework

In Educational area, disruption innovation come with awareness of all stakeholders i.e government, through ministry of higher education, Universities and higher education organizers, students, lecturers, and all industries to take action in order to survive in this digital era. Those who unaware within digitalization will be eliminated. To understand this, we have to understand what strategic inflection point that inflicted in education so that they can change the mindset in order to gain benefit from this disruption. One of the good mindset and strategy that can be proposed in this research is to apply infinite game and infinite mindset as well as to survive in industry. This should be applied in every sector in higher education era. To achieve this, government of Indonesia has been implemented such program called Merdeka Belajar Kampus Merdeka (MBKM) or so-called study independently in independent campus.

Method used in this research is literature research from several policies and alternate strategies to be implemented in higher education institutions and managements to face disruption innovation in digital age.

### 4. Discussion

The main programs are ease of opening new majors, changes to the campus accreditation system, ease of public universities into legal national universities and the right to study three semesters outside the study program. Students are given the freedom to take credit outside the study program, three semesters in the form of 1 semester opportunity to take courses outside the study program and 2 semesters carry out learning activities outside the college. The following student activities that can be done on the independent campus program including student's exchange, internship, teaching in school, research, humanity project, entrepreneur program, independent project, and thematic village development.



Fig. 6. Eight Main Programs of Merdeka Campus

In order to prepare students to face social, cultural, world of work changes and rapid technological advances, student competencies must be prepared to be more relevant to the needs of the times. Link and match not only with the world of industry and the world of work but also with a rapidly changing future. Universities are required to be able to design and implement innovative learning processes so that students can achieve learning outcomes including aspects of attitudes, knowledge, and skills optimally and always relevant. The Merdeka Belajar - Kampus Merdeka policy is expected to be the answer to these demands. Kampus Merdeka is a form of learning in universities that is autonomous and flexible so as to create a learning culture that is innovative, non-restrictive, and in accordance with student needs. The main programs are: ease of opening new study programs, changes in the higher education accreditation system, the ease of state universities becoming legal entities, and the right to study three semesters outside the study program. Students are given the freedom to take credits outside the study program, three semesters which are intended to be 1 semester of opportunity to take courses outside the study program and 2 semesters to carry out learning activities outside the university.

All stakeholder in private universities, must be prepared in the face of disruption in the world of higher education. Most lecturers who generally only focus on teaching in the classroom, currently must be ready with activities outside the classroom in accordance with the tridharma activities of the college, namely learning, research and community service.

Most of the human resources in the unprepared college world, seem overwhelmed by this situation. Campus organizers who are accustomed to being complacent with the number of students only, are currently gray to face this Merdeka-Belajar-Kampus-Merdeka (MBKM) program which means freedom of learning in campus of freedom. The same goes for lecturers and educators. Campuses obliged to facilitate students to take one of the eight programs that have been offered in accordance with Permendikbud no. 3 of 2020. On the other hand, lecturers are also required to be ready to follow student activities in the field[28,29]

In addition, with the condition of the Covid19 pandemic that hit the whole world, not least Indonesia, forcing the parties involved in the implementation of universities to change the mapping of higher education. Some form of digitalization must be done.

Strategic Inflection Point or strategic inflection point that may occur in the world of higher education is as follows:

1. Changes in access that prospective students can make in the search for destination colleges where they can access via the internet at any time
2. Today students tend to change learning patterns, which is increasingly critical with the amount of information available on the Internet.
3. The amount of information available causes paradox of choices, meaning prospective students will be more and more confused with the many choices of study programs and colleges available.
4. Changes in mapping the world of work that demand expertise, especially expertise in the field of information technology is much more important than just a bachelor's degree, whatever the educational background.
5. Higher education organizers are still asleep with the glory of the past with many students, while the quality itself may be partly outdated.
6. The rapid spread of information can be a positive thing, but the bad reputation experienced by a college can also spread very quickly also among prospective students, students, communities, and partners.
7. Kartu Indonesia Pintar (KIP-Kuliah)/student's scholarship as one of the game-changers in the education sector where in the past many low-cost universities were able to compete in finding underprivileged students, but currently all universities can accept prospective students who have KIP-Kuliah and can provide opportunities for students to study without a penny, even given a monthly allowance from the government.

Referring to the infinite games theory model, the organizers of higher education must have a strategy with the following infinite mindset:



Table 1. Games Theory Model and the Organizers of Higher Education

No.	Infinite Mindset	Implementation of Strategy
1.	Advance a "Just Cause"	<p>College Organizers:</p> <ol style="list-style-type: none"> <li>1) Set a Mission Vision Strategy objectives relevant to changing times in the face of disruption</li> <li>2) Adjusting to MBKM conditions and policies</li> <li>3) Improving governance in accordance with spmi kemdikbud policy</li> <li>4) Making breakthroughs in the implementation of tridharma such as campus digitization, improvement of LMS (learning management system) technology, digital library, and various applications that support student learning activities in the MBKM era</li> <li>5) Increase the implementation of cooperation with various partners both at home and abroad in accordance with the program of activities and study programs.</li> </ol> <p>Lecturers</p> <ol style="list-style-type: none"> <li>1) Change the mindset in the implementation of learning</li> <li>2) change the method of face-to-face meetings to be more flexible with online and mixed</li> <li>3) Get used to conducting research and publication of scientific journals, especially those of international standard</li> </ol>
1.	Build trusting teams	Restructuring of organizational structures, downsizing structural positions and optimizing the use of technology in the implementation of activities
2.	Study Worthy Rivals	<ol style="list-style-type: none"> <li>1) Study or conduct comparative studies with universities not only domestically or abroad, especially those with similar study programs</li> <li>2) Preparing for cooperation with competing universities, because in conducting competition, we can also get around it with cooperation, especially through research activities and community service.</li> <li>3) With partnerships with universities that are considered competitors, it will foster the desire to compete in a healthy manner, while supporting MBKM activities through student exchanges.</li> </ol>
3.	Prepare for Existensial Flexibility	<ol style="list-style-type: none"> <li>1) Changing new student recruitment methods from conventional ones transforming into digital ones</li> <li>2) More listening to input from the younger generation, especially students in the changing map of the world of education today</li> <li>3) Studying the characteristics of today's increasingly complex world of work needs</li> <li>4) Add add-values in their colleges so that students have more reason to study in our place.</li> <li>5) Fighting for scholarship quotas from the government both for students (KIP Kuliah, UKT, etc.), as well as scholarships to lecturers for the improvement of academic qualifications</li> <li>6) Encourage lecturers to obtain certification so that they are able to carry out the tridharma of universities with much better economic conditions</li> <li>7) Vociferously championing research grants and community service for internal lecturers</li> </ol>
4.	Demonstrate the Courage to Lead	<ol style="list-style-type: none"> <li>1) Change the mindset of lecturers into facilitators of learning, not the center of education</li> <li>2) Give examples, not orders, especially in the conduct of research and community service</li> <li>3) Encourage students to make various innovations and creation of works that can be submitted to have a IPR</li> <li>4) Conduct international scientific publications by always involving students</li> <li>5) Not waiting for the situation to change, but trying to create change.</li> </ol>

## 5. Conclusion

Strategic Inflection point in the world of higher education occurs due to the era of disruptive innovation. Many factors are the cause of the closure of universities, especially private universities because they are not ready to face radical changes. Infinite games and infinite mindset strategies offered if able to change the mindset of the college organizers, both foundations, structural officials, lecturers, to cooperation partners.

The strategy to deal with strategic inflection points is to observe information from the following two sources: Helpful Cassandras, which as metaphor that means someone who has the right information about the existence or situation that will occur, but no one believes it. Cassandra herself is a woman from Greek myth who is the son of the King of the kingdom of Troy who was cursed by the god Apollo for rejecting her love, so has visions of the future but no one will believe it. In this case, it is a group of people both internal and external companies who have a strong intuition for business mapping changes that will occur in the future, and often give warnings to the company [30,31,32]. Second source are frontline employees are employees who are in the field, so they understand very well the situation that occurs in the field.

In this case, the Cassandras are people that still care about the education development and the frontline people are all educators. In order to increase the awareness and readiness to face inflection point in higher education area, they should change their mindset into infinite game.

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## References

- [1] C. M. Christensen, J. L. Bower, M. E. Raynor, and R. McDonald, 'Disruptive Technologies: Catching the Wave', *Harv Bus Rev*, 1995, Accessed: Feb. 05, 2022. [Online]. Available: <https://hbr.org/1995/01/disruptive-technologies-catching-the-wave>
- [2] G. Hui, 'How the Internet of Things Changes Business Models', *Harvard Business Review Blog*, pp. 1–5, 2014.
- [3] G. Satell, *Mapping innovation : a playbook for navigating a disruptive age*. 2017.
- [4] A. S. Grove, *Only the paranoid survive : how to exploit the crisis points that challenge every company and career*. Profile, 1998.
- [5] G. Satell, 'How Blockbuster, Kodak and Xerox Really Failed (It's Not What You Think) | Inc.com', *Mapping Innovation*, 2017. <https://www.inc.com/greg-satell/pundits-love-to-tell-these-three-famous-innovation-stories-none-of-them-are-true.html> (accessed Feb. 06, 2022).
- [6] M. E. Porter, 'Competitive Strategy Techniques for Analyzing Industries and Competitors : with a New Introduction', *The Free Press*, pp. 1–422, 1980, Accessed: Feb. 06, 2022. [Online]. Available: [http://books.google.com.au/books?id=QN0kyeHXUMC&pg=PR16&dq=intitle:Competitive+Strategy+Michael+Porter&cd=1&source=gbs\\_api%5Cnpapers2://publication/uuid/03E8AAB4-AB47-4209-80C2-A4FFDCD1BC8A](http://books.google.com.au/books?id=QN0kyeHXUMC&pg=PR16&dq=intitle:Competitive+Strategy+Michael+Porter&cd=1&source=gbs_api%5Cnpapers2://publication/uuid/03E8AAB4-AB47-4209-80C2-A4FFDCD1BC8A)
- [7] S. Sinek, *The infinite game*. Penguin Group, 2019.
- [8] CNN Indonesia, "130 Perguruan Tinggi Swasta Ditutup Sepanjang 2015-2019", Aug. 02, 2019. <https://www.cnnindonesia.com/nasional/20190802172238-20-417874/130-perguruan-tinggi-swasta-ditutup-sepanjang-2015-2019> (accessed Feb. 06, 2022).
- [9] M. Dorri, M. H. Yarmohammadian, and M. A. Nadi, "A Review on Value Chain in Higher Education", *Procedia Soc Behav Sci*, vol. 46, pp. 3842–3846, Jan. 2012, doi: 10.1016/J.SBSPRO.2012.06.157.
- [10] Kementerian Pendidikan dan Kebudayaan Republik Indonesia, 'PDDikti - Pangkalan Data Pendidikan Tinggi', *PDDIKTI - Pangkalan Data Pendidikan Tinggi*, 2016. [https://pddikti.kemdikbud.go.id/sejarah\\_pd\\_dikti](https://pddikti.kemdikbud.go.id/sejarah_pd_dikti) (accessed Nov. 28, 2022).
- [11] Y. Hendayana and HUMAS DIKTIRISTEK, 'Dukung Transformasi Digital Pendidikan Tinggi, Ditjen Diktiristek Luncurkan Empat Aplikasi dan Satu Fasilitas Baru – Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan Republik Indonesia', *Kabar Dikti*, Jan. 03, 2022. <https://dikti.kemdikbud.go.id/kabar-dikti/kabar/dukung-transformasi-digital-pendidikan-tinggi-ditjen-diktiristek-luncurkan-empat-aplikasi-dan-satu-fasilitas-baru/> (accessed Nov. 28, 2022).
- [12] C. M. Christensen, 'The innovator's dilemma: when new technologies cause great firms to fail', p. 225, 1997.
- [13] H. Shrivastava, A. T. Ernst, and M. Krishnamoorthy, 'Distribution and inventory planning in a supply chain under transportation route disruptions and uncertain demands', *International Journal of Information Systems and Supply Chain Management*, vol. 12, no. 3, pp. 47–71, 2019, doi: 10.4018/IJISSCM.2019070103.
- [14] X. Wang, Y. Li, L. Tian, and Y. Hou, 'Government digital initiatives and firm digital innovation: Evidence from China', *Technovation*, p. 102545, May 2022, doi: 10.1016/J.TECHNOVATION.2022.102545.
- [15] F. Otike, Á. H. Barát, and P. Kizsl, 'Innovation strategies in academic libraries using business entrepreneurial theories: Analysis of competing values framework and disruptive innovation theory', *The Journal of Academic Librarianship*, vol. 48, no. 4, p. 102537, Dec. 2022, doi: 10.1016/J.ACALIB.2022.102537.
- [16] S. A. Thompson and K. L. Miller, 'Disruptive trends in higher education: Leadership skills for successful leaders', *Journal of Professional Nursing*, vol. 34, no. 2, pp. 92–96, Mar. 2018, doi: 10.1016/J.PROFNURS.2017.11.008.
- [17] A. B. A. Avelar, K. D. da Silva-Oliveira, and R. da S. Pereira, 'Education for advancing the implementation of the Sustainable Development Goals: A systematic approach', *International Journal of Management Education*, vol. 17, no. 3, Nov. 2019, doi: 10.1016/J.IJME.2019.100322.
- [18] D. Cottafava, G. S. Ascione, L. Corazza, and A. Dhir, 'Sustainable development goals research in higher education institutions: An interdisciplinary assessment through an entropy-based indicator', *J Bus Res*, vol. 151, pp. 138–155, Nov. 2022, doi: 10.1016/J.JBUSRES.2022.06.050.
- [19] A. V. Agbedahin, 'Sustainable development, Education for Sustainable Development, and the 2030 Agenda for Sustainable Development: Emergence, efficacy, eminence, and future', *Sustainable Development*, vol. 27, no. 4, pp. 669–680, Jul. 2019, doi: 10.1002/SD.1931.
- [20] N. C. Jackson, 'Managing for competency with innovation change in higher education: Examining the pitfalls and pivots of digital transformation', *Bus Horiz*, vol. 62, no. 6, pp. 761–772, Nov. 2019, doi: 10.1016/J.BUSHOR.2019.08.002.
- [21] H. Pham, Q. N. Tran, G. L. La, H. M. Doan, and T. D. Vu, 'Readiness for digital transformation of higher education in the Covid-19 context: The dataset of Vietnam's students', *Data Brief*, vol. 39, p. 107482, Dec. 2021, doi: 10.1016/J.DIB.2021.107482.
- [22] M. E. Porter, 'The Five Competitive Forces That Shape Strategy', *Harvard Business Review*, 2008. Accessed: Feb. 06, 2022. [Online]. Available: <https://hbr.org/2008/01/the-five-competitive-forces-that-shape-strategy>
- [23] Joel. Watson, *Strategy : an introduction to game theory Third Edition*. New York: W. W. Norton & Company, 2013.
- [24] E. N. (Emmanuel N.) Barron, *Game theory: an introduction*. 2013. Accessed: Feb. 06, 2022. [Online]. Available: <https://www.wiley.com/en-us/Game+Theory%3A+An+Introduction%2C+2nd+Edition-p-9781118216934>
- [25] A. Hayes, 'Game Theory', *Behavioral Economics in Investopedia*, Feb. 02, 2022. <https://www.investopedia.com/terms/g/gametheory.asp> (accessed Feb. 06, 2022).
- [26] R. Ghiabi, 'Game Theory & Strategic Mindset: Understanding the Games We Play', 2018. <https://ghiabi.com/game-theory-strategic-mindset-understanding-the-games-we-play/> (accessed Feb. 06, 2022).

- [27] N. Harre, B. M. Grant, K. Locke, and S. Sturm, 'The university as an infinite game | The Australian Universities' Review', *The Australian Universities' Review*, vol. 59, no. 2, 2017, Accessed: Sep. 19, 2022. [Online]. Available: <https://search.informit.org/doi/10.3316/ielapa.075978014826402>
- [28] Y. E. Harususilo, 'Ini Rangkuman 4 Kebijakan Kampus Merdeka Mendikbud Nadiem Halaman all - Kompas.com', *Edukasi Kompas*, 2020. <https://edukasi.kompas.com/read/2020/01/25/11354331/ini-rangkuman-4-kebijakan-kampus-merdeka-mendikbud-nadiem?page=all> (accessed Mar. 10, 2022).
- [29] Malena, 'Inilah Arti "Kampus Merdeka" dalam Kebijakan "Merdeka Belajar" a...', *Kemdikbud*, 2020. <https://kampusmerdeka.kemdikbud.go.id/news/6/inilah-arti-kampus-merdeka-dalam-kebijakan-merdeka-belajar-ala-mendikbud-nadiem> (accessed Mar. 10, 2022).
- [30] 'Cassandra (metaphor) - Wikipedia'. [https://en.wikipedia.org/wiki/Cassandra\\_\(metaphor\)](https://en.wikipedia.org/wiki/Cassandra_(metaphor)) (accessed Feb. 06, 2022).
- [31] L. L. Schapira, *The Cassandra complex: living with disbelief: a modern perspective on hysteria*. Toronto, Canada: Inner City Books, 1988. Accessed: Feb. 06, 2022. [Online]. Available: <https://archive.org/details/cassandracomplex00scha>
- [32] *Oxford English Dictionary*, Online. Oxford University Press. Accessed: Feb. 06, 2022. [Online]. Available: <https://oed.com/search?searchType=dictionary&q=Cassandra>

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