

Education Start-Up Business Ecosystem

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Abstract - The widespread and growing use of digital technology is changing the teaching and learning process in Indonesia. The COVID-19 pandemic accelerated online learning and gave birth to several Education Technology (EdTech) startups in Indonesia and around the world. However, in the cases of education start-up businesses in Indonesia, it has not had a significant impact on increasing the school participation rate (APS) and minimizing the number of out-of-school children (ATS) which always increases every year. Therefore, this study aims to explore the extent to which the education start-up business ecosystem has been going on. This research methodology uses case study research that focuses only on education start-up businesses in Indonesia. The results show that an education start-up business ecosystem that is increasingly organized and collaborates with the government (central and regional) with efforts to expand and distribute innovations outside Java and Bali will provide better opportunities.

Keywords: business ecosystem, education start-up, teaching and learning, digital technology, online learning.

I. INTRODUCTION

A decade back, actually the growth of startup business in Indonesia has been very rapid since 2011. After the monetary crisis, education startups have been crowded into discussion during the dot com bubble (1998-2000). The meeting point of education start-ups gained momentum during the pandemic. The Covid-19 pandemic has changed the pattern of human life in the world. Almost all sectors have been severely affected by the pandemic. One of the sectors affected is the education sector. In Indonesia, since the announcement of the Covid-19 emergency status, all teaching and learning activities in schools have been suspended. According to government policy, student learning activities are carried out at their respective homes online ^[1]. Here are some startups created by the nation's children that aim to improve the quality of Indonesian education, namely Quipper Video, Ruang Guru, Indonesia X, Haruka Edu, Arkademy, Bahaso, Squaline, Zenius, Kalase, Quintal Meja Kita ^[2].

The development of startups business in Indonesia shows quite rapid and positive development. The number of recruitment is a natural thing, especially in education start-ups, with the average number of students in Indonesia reaching 45 million/year is certainly a guarantee and opportunity for education startup activists (EdTech) coupled with digitalization that cannot be abandoned. Students in Indonesia almost all already have smartphones as a medium of communication, entertainment, and learning.

Seeing the trend of startups in Indonesia that continue to rise and are almost evenly distributed in various regions in Indonesia, of course, there are many obstacles or challenges in their growth. Referring to the results of research from Kovanov & Zozul'ov ^[3] explained that the factors that affect the success of a startup come from external and internal factors. Namely human resources or teams within the startup, organization, processes and environment.

Start-up success is an important topic in entrepreneurship research. The main success factors (survival, profitability and growth) and related theories regarding human resource research and industrial organization are increasingly receiving publicity space. The COVID-19 pandemic factor has triggered the growth of start-ups to accommodate many gaps in people seeking income or profit, one of which is start-ups that are engaged in education. The success of this start-up survives, one of which comes from the input of human resources and the recruitment process also affects the dynamics business ecosystem of the start-up.

The current HR situation is quite complex. The situation of human resources in the business sector is very concerning, one of the problems faced in the world of work is very complex due to regulations that follow trends and situations in the world of work. Ouimet and Zarutskie ^[4] focus on the relationship between employee age, company age and growth and consider how its supply of young workers is related to startup creation in high-tech industries. Kofanov & Zozul'ov ^[3] pay attention to the fact that startups disproportionately recruit employees of young workers by giving them higher wages than older companies.

The condition of education start-ups business in 2023 does not always rise, even tends to fall, with the downsizing of employees adjusting to global economic conditions. At the same time, recruitment is also still carried out if the demand trend continues to increase. Moreover, if it is related to the market share that reaches 61 million students per year, depends on Dapodik Kemendikbud and EMIS Kemenag, it is estimated that start-up investment will still be very possible and its sustainability in recruiting employees in the coming years. However, the authors name can be used along with the reference number in the running text. The order of reference in the running text should match with the list of references at the end of the paper.

II. LITERATURE REVIEW

The study of start-up is a startup company, or a company that has not been operating for a long time. Startups are human institutions designed to create products or services in the midst of extreme uncertainty and start-ups are designed to find a business model that can be repeatable and scale. From this definition, it can be interpreted that a start-up is a startup company designed to find the right business model for its company in order to survive in the midst of extreme uncertainty^[5].

Startup companies are usually still in the process of development and research to find the right market. However, the development of increasingly sophisticated technology makes more and more technology-based startup companies appear. Startups are better known as companies engaged in technology and websites. Startup is synonymous with startups that use information technology in their products^[6].

Startup is a new company that is being developed or has not been operating for a long time or commonly referred to as a startup. To make it easier to find the meaning of a startup, the following characteristics of a company can be said to be a startup^[7].

1. Age of the company. If pregnant women are like a company, then a newborn child can be referring to a new business which has age less than 3 years old.
2. Number of Employees. In general, startups have a slightly smaller number of employees, no more than 30 employees.
3. Human resources with multitasking job. Although companies starting with relatively few employees, employees have the best talents and experts in their respective fields.
4. High morale Employees. In addition, employees who work in startups generally come from millennials who are young and tech-savvy. Usually, this company is founded by young people ranging from 20 to 35 years.

So that with that age range, there are still many desires that always want to be pursued accompanied by passionate enthusiasm.

5. Generally engaged in new technology. Although the real understanding of a startup was technological business, it sometimes does not always have to be run the business in the field of technology. Often, we meet some startups that exist today must have in the field of technology.
6. Website is the major tools. Startup companies certainly have a personal website to carry out all their work, namely to offer and promote the products sold. The business they run includes online services whose operations use applications that are always connected to the company's own website.
7. Startup consumers are main priority. The target of establishing a startup is to get as many consumers as possible. Therefore, startups always present innovations to pamper every consumer they have.

Educational startups are one type of business that focuses on providing education, with the main activity being learning or education. The new era of Educational Technology (EdTech) has brought changes for humans to acquire knowledge and expertise in achieving success in life. EdTech is the technology used in developing and implementing tools (software and hardware) to advance education. Education startups have introduced various methods that can make the education system more effective, efficient, and accessible to all parties.

Education systems around the world (including Indonesia) have undergone significant changes with the presence of EdTech which is manifested in the form of educational startup business models. Education startups have a great opportunity to see education inequality^[8].

In the context of this research, educational start-ups are part of the study of educational technology. Educational technology (EdTech) is defined as an emerging sector at the intersection between technology and education. Technology-based solutions and services that redefine the way traditional education is delivered to students at all levels can largely be categorized as EdTech.

III. RESULTS AND DISCUSSIONS

Based on the research objectives mentioned above, this research is included in case study research. According to Robbins in Silalahi, explained that a case study is a type of research that studies intensively or deeply a member of the target group of an object of research.

3.1 Recognizing the Difference between Education Start Ups

Indonesia is a country that has great potential for the development of the digital economy. Google and TEMASEK on 2018 in their research results, state that one of the things that supports the development of the internet economy in Indonesia is the large number of internet users in Indonesia. Several other facts that support the development of the digital economy in Indonesia include the following.



Figure 1

The digital era affects the pattern of community needs, including in the field of education. The development of startups in Indonesia is indeed quite rapid, but the increasing development of the number of startups is also comparable to the number of failures that befall startups. In fact, startup failure rates around the world can be as high as 90%. CB Insight released 20 things that are the causes of startup failure in building their business, 5 of which are most commonly found as causes of startup failure from internal companies, namely: (1) products that are not needed by the market (42%), (2) too much —burn money (29%), (3) teams that are not solid (23%), (4) lose in competition (19%), and (5) pricing/cost issues (18%).

In maintaining good quality in the company, people are needed who are able to survive in the New Normal situation, and can always provide creative ideas in developing a product. It is also not uncommon for the possibility of employee turnover or turnover, especially during uncertain company organizational conditions due to the current pandemic. To run the production wheel, the employee recruitment system is one that needs to be considered during the COVID-19 pandemic situation. Company startups want the best resources in it, and in developing and achieving organizational goals, Human Resources factors play a very important role in the quality of performance to find out the achievements of the institution or

company organization. According to Akbar^[9] factors that affect the performance of individual workers, namely:

- The capabilities of such individuals,
- Work motivation,
- Support received,
- The existence of the work they do, and
- Their relationship with the organization.

Table 1

Established	Education Start Up	Total of Employees	Total of user
2007	Zenius	1205 (RevoU, 2022)	15,7 billion
2010	Quipper	201-500 (indeed.com)	7,7 billion
2013	Ruangguru	5000 (LinkedIn)	38 billion
2014	Haruka Edu	51-200	person
2019	Sekolah.mu	980 (RevoU, 2022)	4,3 billion

The relationship between the company and Human Resources (HR) is a mutualism symbiosis that cannot be separated. In a company, Human Resources (HR) is the most important component to support the implementation of operational functions and administrative functions of the company. With the existence of quality and highly competent human resources, the company's goals can be realized. Therefore, it is undeniable that every company definitely needs human resources to work for the company. And as a first step to get the required human resources is by accepting new employees or recruitment.

Startup companies that are just starting their careers do a recruitment system for their employees because they definitely want a group of the best team to hire. The key to the success of a startup business is the existence of agile human resources, and having creative ideas that are then processed and become something new and marketed to the community. The problem is that not all humans have creative ideas, so selection is needed to ensure a match between the vacant position and the appropriate person in the position, so that the placement of human resources meets the criteria needed for the welfare of the company. The selection of qualified and ideal employees for companies is a must for companies that want to develop and advance in competing in the industrial world. Because it

starts from a good recruitment process, the company's commitment, vision and mission can be carried out well.

3.2 Practice and Sustainability of Education Start Up Business

Historically, EdTech startups in Indonesia have grown rapidly since 2012. Previously traditional e-learning was more popular among universities to accommodate blended learning. However, learning channels that tend to be monotonous become less absorbed and effectively applied. As internet and smartphone penetration increases, application-based services have sprung up providing new options in learning activities.

Zenius Education is one of the pioneers in the field of EdTech developed since 2004. Two other biggest players, Ruangguru and Harukaedu debuted in 2013. Their initial service is digital learning materials, in the form of e-learning combined with interactive content such as videos. Lately, many startups have sprung up that offer more specific learning content. Some still survive, some die or pivot.

Especially at the beginning of the pandemic, Ruangguru's services experienced a large increase in demand which led to too many and too fast recruitment in the last two years. After massive recruitment, the global economic situation has recently deteriorated drastically and is at its lowest point in decades leading to massive layoffs at education start-ups such as Ruang Guru. It can be seen from the high inflation rate and rising interest rates that make the world investment climate deteriorate significantly.

The Institute for Development of Economics and Finance on 2022 stated that the current business model of startups and technology companies is still a money-burning strategy. Even though it has not made a profit and continues to lose money, investors still finance startups in the hope that the company will develop and advance in the future. Indian EdTech startup, Byju, laid off as many as 5% of its existing employees, or about 2,500 people in various departments. Byju's downsizing policy cost 5,000 jobs. Education startup Zenius has again laid off employees. This is the third time the startup has cut its workforce since 2022. Reportedly, the number of laid-off employees is around 30 people.

In the sustainability of startups, all educational start-ups are not equal in their services. It should be admitted that between Ruangguru and Quipper, for example, there is no apple-to-apple comparison, because Ruangguru has more complete features and services than Quipper. Quipper focuses solely on providing study materials for middle and high school students, and counseling services with masterclass features. Perhaps more precisely, Quipper can only be compared to

Ruangguru, especially for the Learning Room service package.

Quipper itself implements the WFA work system, namely Quipper. It is a company that provides e-learning, coaching, tutoring, and assessment services in Japan, Indonesia, the Philippines, and Mexico. While the headquarter is in London, UK. Quipper allows workers to work WFA or hybrid for the comfort and safety of workers. So Quipper gives workers flexibility if they want to apply to work in WFA.

In practice, Zenius is a startup in the field of education, which is an online tutoring provider that initiates interactive live features. Zenius has implemented the Work from Anywhere system since early March 2020. WFA is considered to have a positive impact on workers in terms of productivity, time, effectiveness, and others. So that this WFA policy still continues until an undetermined deadline, as well as other start-ups.

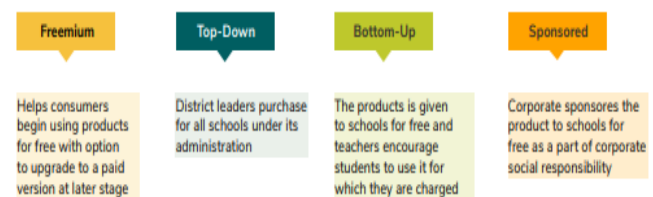


Figure 2

The partnership program is carried out by several startups, one of which is your school start-up. Your school is a learning solution for the younger generation with the principle of learning from anywhere by implementing a blended-learning system, becoming one of the educational platforms in Indonesia with a digital system. Your school is a relatively new startup, but already has 500 learning programs and school partners. With a blended-learning system, your school has implemented the WFA system as well as in building their business, 5 of which are most commonly found as causes of startup failure from internal companies, namely: (1) products that are not needed by the market (42%), (2) too much —burn money (29%), (3) teams that are not solid (23%), (4) lose in competition (19%), and (5) pricing/cost issues (18%) (Efendi, 2018).

3.3 Education Start Up Challenges

Many low-income students and teachers lack the digital devices or skills necessary for home-based learning (World Bank, 2020). In 2020, 67 percent of teachers reported difficulties in operating devices and using online learning platforms. Children with disabilities are the most affected group have not been able to access the services necessary for their personal learning ^[12]. An estimated 4.4 million children

and adolescents aged 7–18 is still out of school and only 55 percent of children from poor families are enrolled in secondary school (UNICEF & OXFAM). The World Bank estimates that the loss of family income due to this pandemic could cause 91,000 children to drop out of school in Indonesia^[10].

The results of the Ministry of Education and Culture's Pusdatin survey shown that only 40% of non-ICT teachers are ready with technology. Some areas still have difficulty accessing the internet. Low-income people also find it difficult to have the necessary devices to access EdTech and quota costs which of course must be incurred every month.

With the reach of education services reaching 61 million students, the sustainability of education startups is expected to continue, although the wave of layoffs will continue. The ability of education start-ups will survive based on investors who support their existence. Based on RevoU research, Ruangguru is a startup or technology-based company with the highest number of new employees. During the period May 2021-May 2022, the number of new employees at the education startup increased by 2,351 people.

In second place is the online buying and selling site Tokopedia, with 1,837 new employees during the same period. Then the Sicepat expedition service company is in third place, with 1,554 new employees. Next is Gojek with 1,180 new employees and J&T Express 1,124 people. Meanwhile, of the 10 companies with the highest number of new employees, there are 3 engaged in the education sector, including, Ruangguru, Sekolah.mu, and Zenius.

If classified, then education start-ups in Indonesia are engaged in the Sponsored business model. Freemium, top-down, and bottom-up business models have not received significant support.

To answer the challenges so that the education start-up business ecosystem can continue to have an impact, especially in increasing school enrollment rates. Not only that, EdTech service users in the community to pay are also still low. This can be seen from the results of a World Bank survey that shows the number of users who are willing to pay after undergoing a free trial period is no more than 5%. But the biggest challenge that EdTech startups have to face actually lies in their social responsibility to improve the quality of education. The results of the Program for International Student Assessment (PISA) survey in 2018 showed that out of 79 countries Indonesia ranked 74 for reading ability, 73 for mathematics, and 71 for science. There are at least three challenges that should get an immediate response.

The first challenge is that most startup business ecosystems are still built in the city center. To answer this problem, Shenoy stated that centralized support makes business ecosystems in other regions weak in supporting early-stage startups. Especially with the condition of education startups that are still not safe to carry out massive employee recruitment. Currently, only Jakarta has received global recognition as the city's business ecosystem. The development of local start-ups will facilitate local needs, with help from major startups that already have large investments.

The second challenge is that expansion into other regions is a challenge due to differences in regulations between regions. Here it needs direction from the local government in fulfilling regulations and requirements so that local startups can develop without being hampered by regulations. Facilitation of openness to digital technology is needed to fulfill the process of teaching and learning activities. With this expansion, a stable and affordable internet connection becomes a necessity.

The third challenge, in addition to distribution, quality needs to be improved from the aspect of mentoring and networking. Early-stage startup funding, distribution of local government programs and incentives for local governments to strengthen the local business ecosystem. The local government will also strive to increase digital talents to build a technology startup business ecosystem in cities outside Java and Bali with new innovations across sectors.

IV. CONCLUSION

Based on the discussion, there are several conclusions as follows:

- 1) The sustainability of the education start-up business ecosystem is an important issue to answer various challenges in the field of education. The education sector still needs improvement, especially since there are still many people in the area who have not received quality education services.
- 2) The accessibility and low knowledge of teachers about ICT trigger the social responsibility of education start-ups to collaborate with central and local governments to provide technical guidance or training to improve the quality of technological literacy.
- 3) The education start-up business ecosystem will have an impact on increasing school enrollment rates and cutting the number of out-of-school children which always increases every year. The social responsibility of education start-ups needs to be involved as part of the government's efforts to increase school enrollment rates and cut the number of out-of-school children.

REFERENCES

- [1] Hignasari, L. Virginayoga. (2021). Analisis Peningkatan Industri Start Up Di Bidang Pendidikan Selama Masa Pandemi Covid-19. Jurnal Ilmiah Vastuwidya. 4. 50-58. 10.47532/jiv.v4i1.251.
- [2] Namira, I. (2019). Mencerdaskan Bangsa, Ini 8 Startup yang Bergerak di Bidang Pendidikan. Idntimes.Com; idntimes.com. <https://www.idntimes.com/tech/trend/izza-namira-1/startup-indonesia-di-bidang-pendidikan/8>
- [3] Kofanov, Oleksii & Zozul'ov, Oleksandr. (2018). Successful development of startups as a global trend of innovative socio-economic transformations. International and Multidisciplinary Journal of Social Sciences. 7. 191. 10.17583/rmcis.2018.3576.
- [4] Ouimet, P., & Zarutskie, R. (2014). Who works for startups? The relation between firm age, employee age, and growth. Journal of Financial Economics, 112(3), 386–407. doi: 10.1016/j.jfineco.2014.03.003.
- [5] M. Arya, R. Ferdiana, and S. Fauziyati, "Analisis Faktor Keberhasilan Startup Digital di Yogyakarta Mardi Arya Jaya 1, Ridi Ferdiana 2, Silmi Fauziati 3," Jurnal. Umk. Ac. Id, vol. 4, no. 1, pp. 167–173, 2017.
- [6] Baskoro, L. (2013). It's My Startup, Solo: Metagraf.
- [7] Setiawan, H. (2019). Pengertian Startup Adalah, Sejarah Singkat dan Karakteristiknya. Liputan6.Com.
- [8] Maula, Nurkholifatul. (2021). PRAKTIK SUMBER DAYA MANUSIA PADA PERUSAHAAN STARTUP EDUTECH DI CV. BIG EDU INDONESIA. Creative Research Journal. 7.11.10.34147/crj.v7i01.292.
- [9] Akbar, S. (2018). Faktor yang mempengaruhi kinerja anggota organisasi. Jiaganis, 3(2), 1–17.
- [10] Gupta, Deepali and Khairina, Noviandri N., 'COVID-19 and the learning inequities in Indonesia: Four ways to bridge the gap. World Bank, 21 August 2020.
- [11] Maula, N. (2022). Peran Startup "Big Edu Indonesia" Dalam Meningkatkan Kemampuan Riset Siswa Di Sekolah Menengah Atas. 712 Proceeding of International Conference on Education, Society and Humanity Vol. 1 No. 1, 2023 Khazanah Intelektual, 6(2), 1442 - 1453. <https://doi.org/10.37250/newkiki.v6i2.160>.
- [12] World Bank, 2020, Kinalis, S. Nikolettseas, D. Patroumpa, and J. Rolim, "Biased sink mobility with adaptive stop times for low latency data collection in sensor networks," Inf. Fusion, vol. 15, pp. 56–63, Jan. 2014.

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