

# *Business Models Canvas of MOOCs: an Investigation of Sustainable Practices for MOOC Universities*

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**Abstract**— Massive Open Online Course (MOOC) is defined as an online open-access course available to an unlimited number of students from any location. These online lectures provide convenience and timeliness for students, enabling them to study from anywhere and anytime. With the demand for online learning, universities require a business design model for the MOOC application that will be used as online learning with the hope that it can be carried out continuously and in the long term to support the existence of online learning. The online learning process in Indonesian education in the era of the Industrial Revolution 4.0 and the implementation of the *Merdeka Belajar Kampus Merdeka* (MBKM). This research aims to create a business model for the implementation of the MOOC application as an open online lecture. The stages of this research method include a literature review study related to business models by the world's leading MOOC platforms, including Coursera, EdX, Udacity, and Udemy. Then analyzed and made a business model using the nine-block canvas method and implemented the MOOC application in the context of the MBKM Curriculum.

**Keywords**— Massive Open Online Course, Business Model Canvas, Higher Education, Online Course

## I. INTRODUCTION

On March 15, 2020, the President of the Republic of Indonesia issued a policy to all Indonesians to work, study and worship from home. This policy was issued in relation to mitigating the spread of the Covid-19 virus. This greatly affects activities in various sectors, especially in the field of Higher Education Institution (HEI). Teaching and learning activities that were initially carried out face-to-face have finally been carried out online.

A Massive Open Online Course (MOOC) is an open-access online course that is open to any number of students from any place [1]. These online lectures offer timeliness and convenience for students, enabling them to study from anywhere and anytime. MOOCs combine studying with new technologies, providing instructors and students to readily connect with one another and drive the learning process, potentially overcoming issues such as race, distance, class, gender, and income.

The demand for online learning, STMIK Yadika Bangil College, located in Pasuruan Regency, East Java Province, requires a business design model for the MOOC application that will be used as online learning with the hope that in the future it can be carried out continuously and in the long term.

Although MOOC provides a special generation of education that bridges the gap between traditional online courses and formal learning [2], students should continue to

use MOOCs to properly absorb and assimilate course information into their educational activities for MOOCs to be successful. The Ministry of Education and Culture currently supports the online learning process in Indonesian education in the Industrial Revolution 4.0 era and the implementation of the MBKM curriculum.

The business models of the world's largest MOOC providers, including as Coursera, EdX from MIT and Harvard, Udacity, and Udemy, have been studied. This study will also describe literature studies related to business models at these MOOCs providers. For long-term implementation, MOOC cannot be applied without the business model of the MOOC itself. So that explains why most universities cannot define their business model because they don't have the funds and resources to change their teaching massively on MOOC systematically. Cooperation between universities, donors, special funds and other sources of income is required. As in previous years, research into business model canvas designed to visualize nine building blocks to start a business. For blockchain education, smart MOOC courses, [3] use a business model canvas. However, there are still many issues with this method of education in terms of authenticity, credit certification, and varied courses.

MOOC providers also have to develop their own business model, which is different from what is possible for the maker. They have no other choice but to collaborate and develop complementary business models. The consolidation of this

business model is critical to the future of MOOCs and online learning. The Business Model Canvas study is concretely analyzed, and once confirmed, it may be used as a reference for research on the MOOC system's application influence, structure and impact within the scope of STMIK Yadika Bangil.

## II. RESEARCH METHODOLOGY

The accompanying is a required research method, such as Research Problem, which is the basic concept in the aim of this study and research in greater depth to know where the running problem is located. After identifying the location of the difficulties that have been studied in STMIK Yadika Bangil Pasuruan-East Java, Indonesia, the Literature Study is a stage that involves determining what needs will be employed. Additionally, the discovery and development of nine Business Model Canvas blocks will serve as the study's framework.

### A. Traditional Business Model for University

To comprehend the influence of higher education digitalization on universities, we must first comprehend the present business model of the University. The general business model of a traditional university is depicted in Figure 1. The university's value proposition is a certificates of degree program that incorporates services for education and certification in the form of a degree [4].

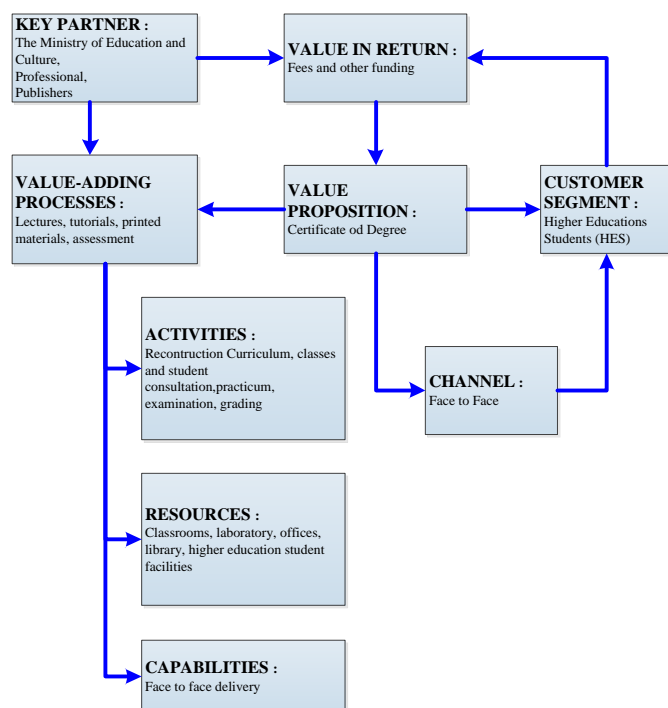


Figure 1. Traditional Business Model

The content delivery system in the traditional university business model is face to face (F2F). The delivery platform for the online university business model is the internet. This one modification has far-reaching impacts on the University's

value-adding procedures. Different actions, resources, and competencies are necessary to handle entirely online distribution methods.

### B. MOOC Providers' Business Model

Many people were drawn to online schooling as a consequence of the pandemic (see Figure 2). MOOC providers, in particular, have reaped significant benefits from their free online courses from prominent universities, which have attracted a large number of students [5].



Figure 2. Growth of MOOCs

There was a lot of debate in the media about business models that will ensure MOOCs' long-term viability[6][7][8]. There are two different types of service providers. Coursera and EdX, the most well-known, distribute MOOCs created by associates. They collaborate with universities and function as editors for a collection of books. Others, such as Udacity and Udemy, do more than disseminate content; they also create MOOCs.

### C. Coursera Business Models

Coursera earns profit by offering a variety of certifications at various levels. The fundamental was simply a certificate of completion at the end of the course. It was given away for free, but it hasn't been seen since May 2015. For a variety of MOOCs, free access is now confined to the original documents. Quiz results and pair-to-pair control option are no longer available. Authenticated certifications bring in more than \$1 million each month for Coursera [9].

The business model of Coursera, which is centered on producing credentials, is constrained by its desire to prevent competing in collaboration with its academic partner. Because Coursera chooses its partners, it may limit itself to solely competing with the smallest universities, giving "the greatest courses for a small charge".

### D. EdX Business Models

EdX focuses on a completely different business plan. It is a non-profit foundation that receives its principal funding has created a partnership between Harvard University and Massachusetts Institute of Technology (MIT). They now have almost 50 institutions as members. Partners have the option of choosing between two models. First, EdX keeps the majority of the course's money. Second, it may provide assistance to its partners and serve as a consultant [10][11].

Courses are generated by the academic partner in the self-service model without course creation input. edX does not assure the quality of its courses; hence they are referred as "Edge" courses rather than full edX courses after they have gone through the edX quality assurance procedure.

#### E. Udacity Business Models

Udacity begins by exploring a same business models as many other major companies, intending to repay investment through certification and the sale of "premium" services to students. Udacity, on the other hand, determined in late 2013 to shift its activities to focus on dealing with the industry rather than colleges [12].

Udacity has stated that it will continue to give free content to students while focusing its growth on paid services such as coaching, testing, accreditation, and sponsored collaborations with training providers.

#### F. UdeMy Business Models

UdeMy [13] works under a unique business strategy. It functions as a marketplace for independent educators to create and sell courses online. UdeMy receives a portion of the fees that students pay to take the courses. This percentage is determined by who recruits the students: the instructor or UdeMy. Other suppliers may employ the same business strategy, making it difficult to retain the finest teachers [14].

#### G. Alex Osterwalder's Business Model Canvas

Strongly sustainable and open business models would make up the ontology of business models more suited to MOOCs. [15] defines strongly sustainable business models as those that are sufficiently lucrative while also providing environmental and social advantages.

The value exchange activities between users and creators of open resources are considered in open business models. Cloud computing services, open-source software, and creative commons content are all examples of open business models. University-specific, autonomous business models must be built in due time because of their reliance on their own value network, and there is currently no common mechanism for MOOCs models.

### III. RESULT AND DISCUSSION

The concept of a "business model" is a based-on theory model utilized in business and science. The use of the term "business" in particular appears to be perplexing: while the notion was formed in the context of for-profit corporations, it is currently applied to any type of organization, whether for-profit, non-profit, governmental or any other.

Furthermore, business models come in many varieties. According to [16], there are four essential dimensions there are Value Architecture, Value Proposition, Value Network, and Value Finance, whereas [17] included the following three components there are Infrastructure, Financial Aspect and Customer Value Proposition

Many frameworks and templates are utilized to either develop a new one or document current ones. The Business Model Canvas is the most commonly utilized one nowadays [18]. [19] introduced the Business Model Canvas to extend his previous work on Business Model Ontology [20]. Table I shows nine components of the canvas with the descriptions.

TABLE I  
COMPONENT OF THE CANVAS

Component	Description
Value Propositions	A commitment to deliver and acknowledge value, as well as the customer's belief that value will be supplied and experienced.
Customer Segments	To define its target market to research the target sector's specialized demands in-depth
Channels	How an organization communicates with its various client segments to convey its value proposition
Customer Relationships	How does an organization intend to develop connections between the clients it serves
Revenue Streams	To sales of courses or other products; advertising fees directly or indirectly related to trademarks; enrollment fee to take unlimited courses for a period of time; services to provide a platform for organizations, so their employees can take their training programs; brands or products involved in courses or final projects;
Key Activities	The most crucial steps in putting a company's value proposition into action
Key Resources	The resources required to provide value to the customers.
Key Partnerships	Strategic and cooperative collaborations does an organization develop to boost its scalability and efficiency
Costs	The costs that connected with each of the aspects listed above, and which components can be used to minimize cost

Whether they require them or not, all learners are often offered a package that includes a variety of services such as learning and teaching, grading and assessment, accreditation, and facilities by universities. MOOCs have sparked a debate over the unbundling of such services.

Unbundling refers to when multiple providers give components of the educational process rather than just one, or when outsourced parts are used in various cases to specialized universities and providers. Support for the research selection process, study guidance and tutoring, content production and development, training, grading and assessment, learning platforms, and studying analytics services are all examples of common services.

The components of the proposed business model canvas for MOOCs in the University are shown in Figure 3. The first round was handled differently because there were no certificates to sell and the university completely supported the project.

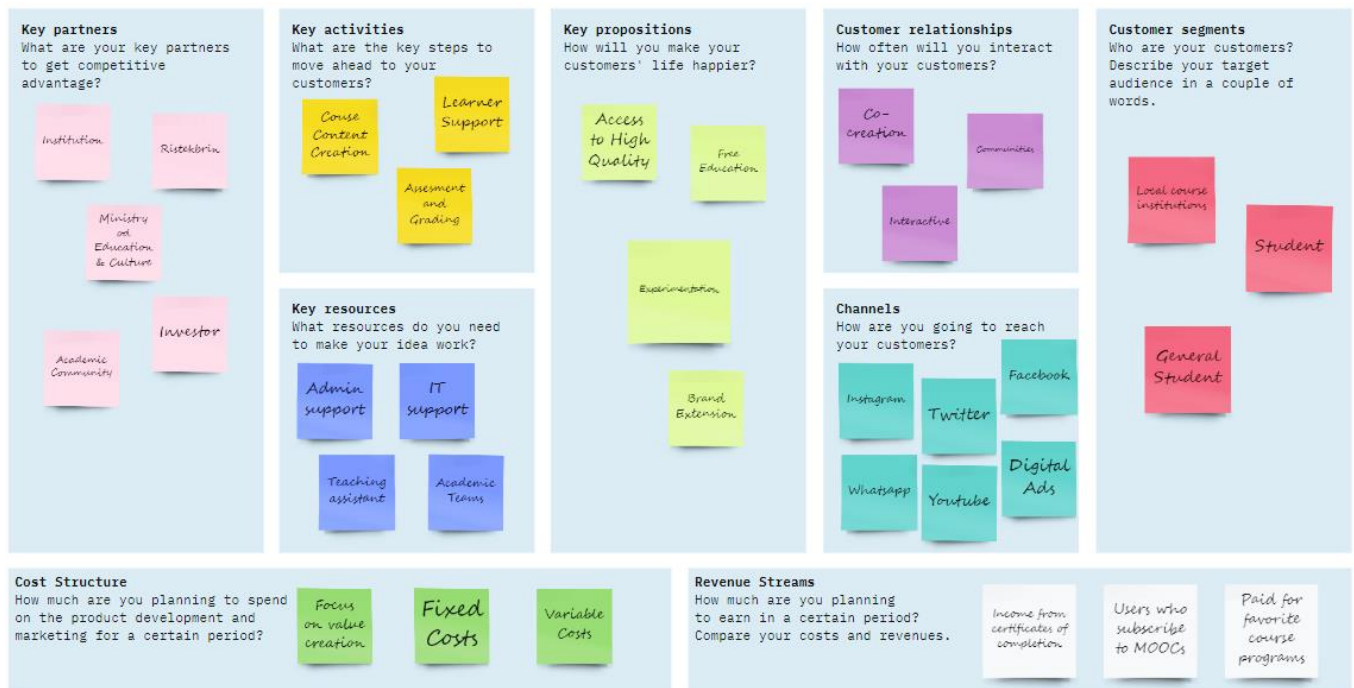


Figure 3. The Business Model Canvas of MOOC

#### IV. CONCLUSION

Massive Open Online Courses (MOOCs) provide a whole course without any cost. However, there are costs and benefits associated with them. The design and dissemination of MOOCs research and additional services beyond the course itself include a number of players. Because of a wide range of MOOCs and the players involved, it's impossible to apply a common economic model to them. At this time, an effective and commercially viable MOOC business model has yet to be devised. Because course in MOOCs is no charge, services cantered around them, and added value (such as certification) are offered to generate revenue.

The Business Model Canvas dimensionality enables us to identify the characteristics of each case investigated by looking at nine components that characterize its business model. This allowed the components of the business model to be compared amongst the many situations analyzed.

Learning platform business models contain four identical components that make it hard to identify between them: key partners, key resources, communication channels, and cost structure. On the other hand, learning platform business models contain five components that they utilize to obtain a competitive edge: Customer segmentation, value proposition, customer connections, key activities, and revenue streams are all terms that can be used to describe a customer segment.

#### REFERENCES

- [1] Kaplan, A.M. and Haenlein, M. (2016) Higher Education and the Digital Revolution: About MOOC, SPOCs, Social Media, and the Cookie Monster. *Business Horizons*, 59, 441-450. <https://doi.org/10.1016/j.bushor.2016.03.008>
- [2] Walji, S., Deacon, A., Small, J., & Czerniewicz, L. (2016). Learning through engagement: MOOCs as an emergent form of provision. *Distance Education*, 37(2), 208-223.
- [3] F. P. Oganda, N. Lutfiani, Q. Aini, U. Rahardja and A. Faturahman, "Blockchain Education Smart Courses of Massive Online Open Course Using Business Model Canvas," *2020 2nd International Conference on Cybernetics and Intelligent System (ICORIS)*, 2020, pp. 1-6, doi: 10.1109/ICORIS50180.2020.9320789.
- [4] Lambert, S. and Carter, A. (2013). The Virtual University: Impact on Australian Accounting and Business Education. *Institute of Chartered Accountants Australia*. 77-85.
- [5] Shah D. (2020) By the Numbers: MOOCs in 2020. Class Central November 2020. Retrieved from <https://www.class-central.com/report/moocs-stats-2020/>
- [6] Attis, D., Koproske, C., & Miller, C. (2012). Understanding the MOOC trend: The adoption and impact of massive open online courses. Washington, DC: The Education Advisory Board. Retrieved from <http://www.eab.com>
- [7] EvoLLution NewsWire (2013). Finally, a business model for MOOCs. EvoLLution. Retrieved from <http://www.evollution.com>
- [8] Young, J. R. (2013, February 21). Revenue-sharing models between edX and university partners. The Chronicle of Higher Education. Retrieved from <http://www.chronicle.com>
- [9] Shah D. (2015) How does Coursera make Money?. Edsurge October 15. Retrieved from <https://www.edsurge.com/news/2014-10-15-how-does-coursera-make-money>
- [10] Kolowich S. (2013). How EdX plans to earn and share revenues from its free online course. The Chronicle of Higher Education. 21 february. Retrieved from <http://chronicle.com/article/How-EdX-Plans-to-Earn-and/137433/>
- [11] Roos D. (2014). How edX Works. 17 October. HowStuffWorks.com. Retrieved from <http://people.howstuffworks.com/edx.htm>
- [12] Chafkin M. (2013). Udacity's Sebastian Thrun, Godfather of free online education changes course. Fastcompany, 14 November. Retrieved from <http://www.fastcompany.com/3021473/udacitysebastian-thrun-uphill-climb>
- [13] Udemy (2013) Udemy. Retrieved from <http://www.udemy.com>
- [14] McGuire R. (2014) Is the Udemy Marketplace model still valuable to instructors?. Skilldip. 5 December. Retrieved from

- <http://www.skilledup.com/insights/is-the-udemy-marketplace-modelstill-valuable-to-instructors>
- [15] Upward, A. (2013). Towards an Ontology and Canvas for Strongly Sustainable Business Models: A Systemic Design Science Exploration, Masters of Environmental Studies / Graduate Diploma in Business and Environment, York University, Faculty of Environmental Studies and Schulich School of Business.
- [16] Al-Debei, M. et al. "Defining the Business Model in the New World of Digital Business." AMCIS (2008).
- [17] Yoram M. Kalman (2014) A race to the bottom: MOOCs and higher education business models, Open Learning: The Journal of Open, Distance and e-Learning, 29:1, 5-14, DOI: 10.1080/02680513.2014.922410
- [18] Field, A. (2013) Discovering Statistics Using IBM SPSS Statistics: And Sex and Drugs and Rock "N" Roll, 4th Edition, Sage, Los Angeles, London, New Delhi.
- [19] Osterwalder, A dan Pigneur, Y. (2010). Business Model Generation : A Handbook for Visionaries, Game Changers dan Challengers. New Jersey : John Wiley & Sons, Inc
- [20] Osterwalder, A. (2004). The business model ontology a proposition in a design science approach.

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