MOOCS DEVELOPMENT FOR SUCCESSFUL START UP BUSINESS

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Abstract

A start-up company is one of the many new website-based companies that have emerged due to the rapid development of business along with the development of the internet and online media. Start Up has an important role in advancing micro, small and medium enterprises (MSMEs). Building a start-up requires steps that must be taken. In general, the reference to building a start-up business does not only focus on the management stage, but also includes other aspects, such as marketing, product innovation, financial management, and human resource development. These aspects are very important to ensure that a start-up business can grow and compete in a competitive market. Thus, running a start-up business requires knowledge and experience so that the business can continue to exist. There are several ways that can successfully develop a start-up business. One practical way that can be done is to learn the material through MOOCs Successful Start Up Business as an open and massive learning platform. The type of MOOCs developed in the form of xMOOC using ADDIE MOOCs developed consists of seven materials, namely (1) Basic Concepts of Start Up Business, (2) Start Up Business Planning, (3) Starting a Start Up Business, (4) Determining Business Ideas, (5) Business Development, Turnover, and Profits, (6) Avoiding the Death of a Start Up Business, and (7) Successful Start Up Business Inspiration. The development of these MOOCs can provide knowledge in developing a Start Up business with adequate entrepreneurial skills so that the business can become successful.

Keywords: MOOCs, online business, start up.

1 INTRODUCTION

The creative economy in Indonesia has been significantly impacted by the development of contemporary technology and industry, which has facilitated the transition to a digital economy. This is facilitated by the emergence of various technology-based start-ups. MSMEs in Indonesia are significantly influenced by start-ups. Zimmerer and Scarborough argue in the "Journal of Management and Business Economics" that an entrepreneur is an individual who establishes a business that is ready to face risks and achieve profit and growth goals by identifying substantial benefits and gathering the necessary resources (in Jullimursyida, 2019).

The rapid expansion of the business world along with the advancement of the internet and online media has resulted in the emergence of various new website-based businesses (Sudaryono et al., 2020). These businesses are referred to as start-ups (Junita, 2019). Research by Fitta et al. (2020) revealed that information technology-based start-ups are companies that provide products or services both online and offline, and have a website or blog. Start-ups are business investment initiatives that have the potential to independently drive the entire performance of a business. This is known as the understanding of start-ups (Sulastri, 2014). However, the term "start-up" or "start-up business" is more appropriate when associated with the development of business systems in the digital era which is closely related to the online internet world (Hasani et al., 2017). Global e-business is influenced by various innovative concepts that have been developed by start-ups (Saptono et al., 2020). Many Indonesian startups have achieved success on an international scale, including Tokopedia, Traveloka, and GO-Jek, which are currently classified as Unicorn startups (Yusuf et al., 2020).

The Industrial Revolution 4.0 is mainly focused on technological shifts. Almost all activities that were previously done manually and conventionally have been done digitally using smart devices (Fauzan & Dhewanto, 2021). The main sector affected by this change is the industrial sector, which is related to the production system. Large-scale machines are used to produce materials and products, with digital devices as the main production tools. Human labor has been drastically reduced and replaced by machines, as all operations are automated. Only centralized programs can allow production to operate independently.

Many parties are required to continue to adapt in the face of rapid technological changes, as shown by the current situation. In particular, the field of education is at the epicenter of development or transformation. Science, technology, and human resources can collaborate more easily in this scenario. Likewise, many parties have expressed their aspirations to implement innovation and produce new concepts that will be useful for advancing civilization. In addition to information technology, entrepreneurship is another rapidly growing field.

In general, three important factors to consider when establishing a business for novice entrepreneurs or start-ups are capital, business sector, and experience (Caliendo & Kritikos, 2019). In addition, start-ups prioritize the provision of services, product innovation, and the availability of facilities for consumers and stakeholders in order to meet customer demand and run their businesses (Goyal et al., 2019; Pukala, 2019). Another thing that Goyal et al. put

forward is that the development of start-ups is greatly influenced by their efforts in building networks.

Several actions must be taken to establish a start-up (Hadi, 2018). The management stage is not the only focus of reference in establishing a start-up business, but also includes other aspects, such as marketing, product innovation, financial management, and human resource development. These aspects are very important to ensure that start-up businesses can grow and compete in a competitive market (Afdi & Purwanggono, 2017). Furthermore, the advancement of information technology cannot be separated from the development of start-up companies in order to facilitate their development (Setiawan, 2018). Therefore, it is very important for business professionals to stay informed about technological advances in order to be able to quickly adapt and innovate in response to market fluctuations.

The Indonesian government is implementing the 1,000 Gerakan (Thousand Start Up) program to provide comprehensive support for the development of start-ups to make Indonesia a superpower. The Indonesian government is targeting to establish 1,000 new start-ups through this initiative. Dolorosa emphasized that 90% of start-ups worldwide fail, thus hampering the expansion of the creative economy (Widyawan & Santosa, 2018). According to Afdi & Purwanggono (2018), the lack of human resources in a start-up is one of the ten factors that cause its failure. In addition, it is important for entrepreneurs to understand the priorities of the wider community and consumer needs compared to the needs of the company (Hariguna et al., 2019).

On the other hand, in the context of education, technological developments have also introduced new forms of learning that provide wider and more flexible access to education. Massive open online courses (MOOCs) are one of the advances in online learning practices. MOOCs are a very broad online learning experience with no prerequisites. Initially, the term MOOCs was used to refer to online courses that were free or at no cost. However, the MOOCs delivery model has evolved over time, and now learners are required to pay to obtain a certificate of completion (Belawati, 2019).

There are two types of MOOCs from a pedagogical perspective: (1) cMOOCs, which emphasize interaction between MOOC participants, and (2) xMOOCs, which emphasize interaction between learners and the learning materials provided. The MOOCs developed in this study are xMOOCs. The xMOOC pedagogy is more structured because the MOOC developer has prepared the materials in advance. The learning materials that have been prepared in the LMS

consist of eight sessions that will end with a competency test to obtain a certificate of completion if passed and a certificate of completion if participants do not pass. The learning process in xMOOCs is intended to follow the flow of the material, which includes video content, and includes assessments that are automatically evaluated by the computer. The learning process in xMOOCs is usually scheduled within a certain deadline, and learners will be passive because the teacher has designed it (Belawati, 2019). The MOOCs developed in this development research are pure online learning (fully online). The MOOCs that will be developed use asynchronous communication methods in terms of interaction.

Although many MOOCs are available, there are still not many courses that focus on knowledge and skills that are relevant to life in the era of the industrial revolution 4.0. In the results of observations of the choices of MOOCs currently available, researchers assessed the lack of MOOCs that focus on entrepreneurial skills and start-up business development which are very vital in the context of the digital economy. In response to this problem, researchers formulated a research problem: how to design and present MOOCs courses so that they can better support and facilitate learning the skills needed to successfully develop a start-up. This study intends to develop MOOCs that are cost-effective, flexible, and have a wide scope for online course learning in formal and non-formal institutions, as shown in the description above. The use of MOOCs applications is the right solution, as evidenced by the fact that 84.03% of participants expressed a very positive perception of online learning through MOOCs in previous research (Oksatianti et al., 2020). The development of these MOOCs is important to do because through these MOOCs, participants will be provided with provisions to be able to develop a start-up business with adequate entrepreneurial skills so that the business can grow. To strengthen its position as a pioneer in distance education in Indonesia, the campus needs to continue to develop MOOCs with various materials, both academic and practical, such as *Sukses Berbisnis* Start Up which is one example of a development project that is being planned through research.

2 METHODOLOGY

The scope of research and development (R&D) activities includes the development of MOOCs innovations. The ADDIE model is used in MOOC development. The ADDIE model was chosen because of its detailed structure, its suitability for the development of instructional learning media, and the specific objectives to be achieved by the developed media. Additional benefits of the ADDIE model include an easy development process and the inclusion of trials to ensure the reliability of the media development results (Serevina, 2018).

The development of the ADDIE model includes five stages, namely: (1) Analysis, (2) Design/planning, (3) Development, (4) Implementation, and (5) Evaluation/feedback. The initial stage of this research is analysis, namely identifying problems that exist in the locations used as research samples. Design, namely the creative process to develop media display designs and media navigation flows. Development, namely making media according to the media design at the design stage; real methods for implementing the learning media that has been developed; Evaluation, namely the stage carried out to assess the products that have been made (Tegeh & Kirna, 2010).

3 FINDINGS AND DISCUSSION

The findings of this study are Massive Open Online Courses (MOOCs) entitled *Sukses Berbisnis* StartUp. The presence of these MOOCs is a new breakthrough or innovation that aims to improve popular skills in the industrial era 4.0, especially in the field of entrepreneurship. The development of MOOCs is designed to meet the needs of individuals in the context of the entrepreneurship marketplace by considering the current factual conditions that are increasingly dynamic and competitive. According to experts, this aims to improve skills that are relevant to the market and the latest trends. In the digital and globalization era, the ability to understand and navigate complex markets and manage effective business strategies is very important. In an ever-evolving business environment, MOOCs can offer the training needed to help entrepreneurs acquire practical skills and current knowledge. The ADDIE development model is imitated in the MOOC creation process. Overall, the model includes five stages: analysis, design, development, implementation, and evaluation. The following is an explanation.

3.1 Analysis Stage

The analysis stage is carried out by conducting interviews with material experts from lecturers/practitioners in the field of startup technology science so that things and material needs that must be present in the Successful Start-Up Business MOOCs can be found. The interview process is semi-structured to obtain responses from respondents regarding their thoughts and feelings about professional communication in the workplace. The following is a needs analysis interview in the context of developing the Successful Start-Up Business MOOCs.

Based on interviews conducted with experts, many start-up founders in implementing marketing strategies are often limited by resources and experience. In today's digital era,

marketing is not only about promotion, but also about building relationships with customers, optimizing the use of data to inform decisions, and aligning products with market needs. This certainly requires training so that the ability to build start-ups can be improved.

"The professional ability of startup founders to execute marketing strategies is often limited by resources and experience. Although many of them have innovative ideas and strong visions, the lack of specific experience in digital marketing, market segmentation, and branding is often a barrier. In today's digital era, marketing is not only about promotion, but also about building relationships with customers, optimizing the use of data to inform decisions, and aligning products with market needs. Many startup founders need more practical knowledge in managing SEO campaigns, content marketing, social media, and analytics to compete effectively."

Strengthened by previous research by Rahmadiane et al. (Rahmadiane et al., 2022) which revealed that there are factors that influence start-up growth consisting of infrastructure, HR, and cybersecurity factors. In this case, the role of HR plays a major role in the development of start-ups. The experience of a start-up founder is one of the experiences gained by someone who starts or runs a newly formed company (Banerji & Reimer, 2019). This includes the planning process, business development, fundraising, marketing, and day-to-day operations of the company. They must be able to take risks and adapt to rapid changes in the market. Start-up founders must also have the ability to manage and direct teams, and make the right decisions in difficult situations.

Experts also mention that in the start-up world, an effective marketing strategy is a very necessary component. Effective marketing allows start-ups to differentiate themselves from competitors, create brand value, and communicate their value proposition effectively. This is certainly a potential if the marketing strategy is well designed, then business opportunities will also run with increasing.

"It is crucial for startup founders to master various marketing strategies, as this directly impacts their ability to attract and retain customers, as well as secure investment. Effective marketing allows startups to differentiate themselves from competitors, create brand value, and communicate their value proposition effectively. Professional marketing skills also reflect a founder's ability to formulate a marketable vision and develop robust tactics for sustainable growth."

Startups often have to operate in high market uncertainty. They must quickly adapt to market changes, new technologies, and competitive dynamics. This requires strong analytical skills and flexible business strategies (Blank & Dorf, 2012). Successful startups are often recognized for their innovation and impact on industry and society. Startups that are able to utilize marketing strategies effectively have a greater chance of being recognized and succeeding in a competitive market (Nasution, 2024). For example, startups that utilize data to understand customer needs and develop innovative products tend to gain recognition faster from the market and investors. This recognition comes not only in the form of awards but also opportunities for collaboration with large companies, access to investor networks, and the opportunity to participate in incubation and acceleration programs.

According to experts, marketing strategy skills are important to increase opportunities and development of start-ups. In a fast-paced and competitive business environment, start-ups need an effective marketing approach that not only includes product or service promotion, but also involves a deep understanding of the target market, consumer behavior, and emerging trends. In addition, the ability to formulate and implement a solid business strategy is needed by entrepreneurs who are just starting out. Start-up business strategy skills are also needed by entrepreneurs who are just starting out.

"A deep understanding of marketing strategy enables startup founders to survive and thrive in a highly competitive environment. With a strong understanding of marketing, founders can identify untapped market niches, optimize the use of limited resources, and quickly pivot or adjust strategies based on market feedback. This is also vital in the product development phase, where market validation and product iteration can be heavily influenced by the ability to interpret marketing data and customer behavior."

It is important for startups to conduct a thorough analysis of their business strategies, as this allows them to develop sustainable competitive advantages, manage market-related risks, and identify new growth opportunities. Furthermore, understanding evolving consumer behavior and market trends in the 5.0 era will enable organizations to adapt their marketing strategies to evolving consumer preferences and requirements (Suhairi et al., 2023). Business personnel can be more proactive in product and service development, consumer relationship building, and achieving their business goals by having the capacity to analyze history and anticipate market trends (Susi et al., 2023).

Practical skills in building start-ups can be provided directly without having to be tied to a university. This ability can be developed by anyone and at any time so that coordination, collaboration, and synergy in the world of work are established effectively so that the goals of the agency or company can be achieved. Therefore, MOOCs are considered suitable as a learning medium because they have an open and massive nature.

"Enhancing knowledge through MOOCs and other online learning resources is a valuable investment for startup founders. These courses offer highly relevant and up-to-date insights from industry experts that are often unavailable through traditional methods. Online courses offer much-needed flexibility for startup founders who often work long and irregular hours. MOOCs can also be a cost-effective way to gain certifications and credentials that can increase credibility with investors and customers."

MOOCs have the capacity to offer flexibility, accessibility, and fast completion rates at low cost to individuals interested in learning (Yuan & Powell, 2013). MOOCs are online and open learning platforms that fall under the category of distance learning, but on a much larger and broader scale (Pomerol, Epelboin, & Thoury, 2015). The concept of massive open online courses is inspired by the need for academic materials and the potential for MOOCs to be accessed by anyone openly and massively, which is useful for honing one's abilities or skills so that one can have the ability, experience, knowledge, and networks in the digital learning era.

In addition, expert interviews offer suggestions and input on the content of the material that should be provided to the general public, especially entrepreneurs, to improve their business building skills. The content or things that must be included in the Successful Start Up Business MOOCs include current and applicable content and provide feedback to participants according to the input from the experts below.

"To learn marketing strategies through MOOCs, startup founders need: the course must include current case studies, industry trends, and best practices. MOOCs must also be designed to provide knowledge that can be applied immediately, with an emphasis on practical learning through projects and simulations. Building networks with fellow students and professionals in the same field for the exchange of ideas and opportunities. Feedback and analytics from the platform to help users understand their progress and areas that need further improvement. The material presented also certainly needs to include tips for building a startup. In addition to the material, it would certainly be better if it was equipped with learning video media, there were

practice questions, and discussions. The material presented, I suggest, can also be given the context of work world problems so that solutions can be found. Then, to complete it, enrichment material or other Open Education Resources (OER) (OER) are needed.

3.2 The Stage of Design and Development

The results of the analysis stage that have been obtained are used to proceed to the design and development stage. At this stage, the content of the material and visual design of MOOCs are arranged to meet the needs of popular skills required by the community. This study focuses on developing content for MOOCs using the Learning Management System (LMS) and adopting a self-paced instruction approach that allows participants to adjust their learning time based on individual capacity. The main topic developed is skills in building an online start-up business. The design and development steps of this MOOCs research include the following.

1. Creating PPT-style materials that include the following materials:
   A. Introduction to MOOCs
   B. Basic Concepts of Start Up Business,
   C. Start Up Business Planning,
   D. Starting a Start Up Business,
   E. Determining Business Ideas,
   F. Business Development, Turnover, and Profit,
   G. Avoiding the Death of a Start Up Business, and
   H. Inspiration for a Successful Start Up Business
2. Utilizing graphic animation techniques to create visually appealing and contemporary videos.
3. Developing formative assessments and practice questions for each session.
4. Conducting session introductions, summaries, and descriptions of materials for each session.
5. Review by experts/specialists of the MOOC materials that have been developed.
6. Reviewing the findings of the investigation.
7. Uploading materials to the UT MOOCs Learning Management System (LMS)

3.3 The Stage of Implementation and Evaluation

The third stage of this research is implementation and evaluation. After being developed, MOOCs are implemented to experts involving media, material, and language experts to assess

and see the feasibility and shortcomings of the MOOCs that have been developed so that revisions can be made. A practical trial is needed to determine the feasibility of the MOOCs that have been developed. This is done to evaluate their feasibility and quality. The practical trial involves respondents who are material experts, language experts, and media experts. Furthermore, a media evaluation stage is carried out to refine the MOOCs according to the experts' assessments.

The purpose of the feasibility test conducted by experts is to evaluate the success of MOOCs in the startup sector. Experts in their respective fields carry out this examination, including material, language, and media experts. The MOOCs that have been developed are first tested by experts, who then review and observe them. Furthermore, the experts are asked to fill out the questionnaire that has been provided. The assessment results are based on the feasibility of the material, language, and media in the MOOC. A more complete explanation is given below.

3.3.1 Media Suitability Test Results

The media validation test assessment includes two components: (1) visual and audio appearance of MOOCs, and (2) software implementation and engineering. Table 1 shows the results of the media experts' evaluation of the suitability of media in MOOCs.

Table 1. Results of the Suitability Test by Media Experts

No.	Aspect	Item Number	Average Percentage of Eligibility	Criteria
1	Visual and audio appearance of MOOCs	1-0	85,0	Very Good
2	Implementation and software engineering	11-15	80,0	VeryGood
Average Overall Score			82,5	Very Good

The following is an explanation of the results of the feasibility test conducted by media experts on MOOCs.

1. Visual and audio appearance of MOOCs

   The visual and audio appearance aspects of MOOCs consist of six indicators, namely layout accuracy, design suitability, image clarity, writing suitability, music suitability, and video quality. The average percentage of suitability for each indicator is 85.0%. This means

that the visual and audio appearance of this MOOC media has met the "Very Good" standard.

2. Implementation and software engineering

   The implementation and software engineering aspects consist of two indicators, namely media quality and ease of use. The implementation and software engineering of this MOOC media have met the "Very Good" criteria based on the average percentage of suitability of each indicator, which is 80.0%.

The average aggregate assessment result for the suitability of this MOOC media is 82.5%, with the interpretation of "Very Good," based on the percentage results of the two aspects.

3.3.2 Language Proficiency Test Results

The language validation test assessment includes three components: effectiveness, communicative sentences in the MOOC, and easy-to-understand language. The assessment instrument was developed in accordance with the required media language eligibility standards. The results of the language eligibility assessment are presented in Table 2.

Table 2. Results of the Eligibility Test by Language Experts

No.	Aspect	Item Number	Average Percentage of Eligibility	Criteria
1	Effectiveness of sentences in MOOCs	1-5	80,0	Very Good
2	Sentences in the MOOCs media are communicative	6-10	75,0	Good
3	The language in the MOOCs media is easy to understand	11-15	80,0	Very Good
Average Overall Score			78,3	Good

The results of the MOOCs feasibility assessment conducted by material and language experts are discussed below.

1. Effectiveness of sentences in MOOCs

   The sentences in these MOOCs have met the criteria of "Very Good" because the average percentage of feasibility for each indicator achieved is 80.0%.

2. Sentences in the MOOCs media are communicative

The MOOCs sentences are communicative and meet the criteria of "Good", as indicated by the average percentage of feasibility for each indicator achieved of 75.0%.

3. The language in the MOOCs media is easy to understand
   The average percentage of feasibility for each indicator is 80.0%, which indicates that the language in this MOOCs media is easy to understand in the "Very Good" category.

The average aggregate assessment result for the feasibility of the MOOCs language is 78.3% (interpretation: "Good"), as indicated by the percentage results of the three aspects.

3.3.3 Material Feasibility Test Results

The assessment of the material validation test includes three dimensions: content feasibility, presentation feasibility, and the use of animated videos in MOOCs media. Table 3 illustrates the results of the material feasibility assessment.

Table 3. Feasibility Test Results by Material Experts

No.	Aspect	Item Number	Average Percentage of Eligibility	Criteria
1	Content feasibility in MOOCs media	1-7	78,5	Good
2	Presentation feasibility in MOOCs media	8-15	85,7	Very Good
3	Use of animated videos in MOOCs media	16-20	85,0	Very Good
Average Overall Score			83,1	Good

The following is a description of the results of the MOOCs material suitability assessment carried out by material experts.

1. Suitability of content in MOOCs media
   The suitability of MOOC media content is determined by two indicators, namely the truth of the content and the suitability of the material to basic competencies. The average percentage of suitability for each indicator is 78.5%. This shows that the content of this MOOCs media has met the "Good" suitability criteria.
2. Suitability of presentation in MOOCs media
   The two indicators that include the aspect of the suitability of material presentation in MOOCs media are material presentation techniques and material presentation support. The

average percentage of suitability for each indicator is 85.7%, which shows that the presentation in the MOOCs has met the "Very Good" criteria.

3. Use of animated videos in MOOCs media

   The animated video component is the only indicator of the use of animated videos in MOOCs. The use of animated videos in MOOCs has met the "Very Good" criteria, as evidenced by the average suitability level of 85.0% for each indicator.

The average aggregate assessment result for this MOOCs media material was 83.1%, with an interpretation of "Very Good," based on the percentage results of the three aspects.

4 CONCLUSION

This study focuses on the development and content of MOOCs using Learning Management System (LMS) as a solution to the research problem. The self-paced instruction model is utilized to create a learning structure that allows participants to allocate learning time according to their individual abilities. The topic of this study develops popular skills needed by the community, namely starting a start-up business. Based on the problems and the results of the expert needs analysis, it can be concluded that it is important to study strategies in developing a start-up. Therefore, the MOOCs Successful Start-up Business that were developed studied various strategic aspects, including marketing, management, and innovation in developing a start-up. The development of the MOOC Successful Start-up Business took place in two stages: development and feasibility testing. Creating attractive MOOC content and appearance is the initial stage of the MOOC development section. Seven materials are included in the MOOC to facilitate the development of start-up capabilities. The second stage involves a feasibility test conducted by experts. Practical tests are needed to evaluate the quality and feasibility of the MOOC that has been developed. As respondents, the feasibility test involves material, language, and media experts. The findings of the MOOCs feasibility assessment from the aspects of language and materials as well as media aspects can be concluded that it meets good criteria and is suitable for use as an open and massive learning platform to develop a person's skills in communicating adaptively and professionally in online business.

ACKNOWLEDGEMENTS

The researcher would like to thank LPPM-UT for funding this research activity in 2024. In addition, the researcher would like to thank the experts/specialists and resource persons who have provided input for the development of this MOOC.

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