

Improving Digital Skills of Islamic Boarding School-Based MSMEs through Project-Based Vocational Training

Heri Cahyo Bagus Setiawan^{*1}, Ilham², Tatag Herbayu Latukismo³, Nuzulul Fatimah⁴

^{*1}Management Study Program, Universitas Negeri Surabaya, ²Information System Study Program, Universitas Islam Negeri Sunan Ampel Surabaya, ³Management Study Program, Universitas Krisnadwipayana Jakarta, ⁴Management Study Program Universitas Nahdlatul Ulama Surabaya

***Corresponding author:**

Heri Cahyo Bagus Setiawan

E-mail address: herisetiawan@unesa.ac.id

Received: April 30, 2025

Accepted: May 29, 2025

Published: June 11, 2025

Abstract

Islamic boarding schools in Indonesia have long been known as centers of religious education, but in this digital era, Islamic boarding schools are faced with the challenge of transforming into community empowerment institutions through vocational and entrepreneurial education. This study examines the effectiveness of project-based vocational training in improving the digital skills of MSME actors fostered by the Mukmin Mandiri Islamic Boarding School in Sidoarjo. This training includes creating marketplace accounts, managing social media, and creating digital product catalogs. Through a project-based learning approach, participants are given the opportunity to learn directly through real experiences. The study used a quantitative method with pre-test and post-test experiments on 45 participants who participated in the training. The results showed a significant increase in digital skills, with an average score increasing from 40.00 (pre-test) to 85.00 (post-test), reflecting the effectiveness of this training in improving the digital capabilities of MSME actors. These findings confirm that the project-based training model not only improves technical skills, but also strengthens self-confidence, adaptive mindsets, and digital entrepreneurial motivation, while strengthening the role of Islamic boarding schools in encouraging community-based economic empowerment in the digital era.

Keywords: Islamic Boarding School, MSME, Digital Skills, Vocational Training, Project-Based Learning, Digital Economy

1.Introduction

Islamic boarding schools in Indonesia have long been centers of religious education and character development for the community (Sakai, et. al, 2018). However, entering the digital era and knowledge-based economy, Islamic boarding schools are required to transform into community empowerment institutions through vocational education innovation and strengthening entrepreneurship (Jazil, Fahmi, et.al, 2021). One model of this transformation can be seen at the Mukmin Mandiri Islamic Boarding School in Sidoarjo, East Java, as a similar study was conducted by Setiawan (2018) who emphasized that Islamic boarding schools that transformed their entrepreneurial orientation were the Mukmin Mandiri Islamic Boarding School. The Mukmin Mandiri Islamic Boarding School has succeeded in developing the agribusiness and agro-industry sectors, especially in coffee production which is not only distributed in the local market, but has also succeeded in penetrating the export market to Malaysia and Australia (Misjaya, et.al 2019). This export was launched directly by the Indonesian Minister of Trade Gita Wirjawan in 2014, as well as the Minister of Cooperatives and SMEs AAGN Puspayoga in 2016 to launch coffee exports to Australia, emphasizing the position of this Islamic boarding school as a national model in Islamic boarding school-based economic empowerment (Setiawan, et.al, 2020).

This success has encouraged many working visits and comparative studies, including by the Minister of SOEs, Minister of Manpower, Governor of East Java, Regent of Sidoarjo, Mayor of Surabaya, and Head of the East Java Plantation Service, Head of the East Java Cooperative and SME Service and Head of the East Java Industry and Trade Service, as well as the Chairman of KADIN and the Chairman of the Indonesian Coffee Exporters Association and the Chairman of the Indonesian Export Companies Association, to Bank Indonesia, East Java Province (Setiawan & Komara, 2020). In addition, fostered by Bank Indonesia East Kalimantan, various Islamic boarding schools from all over

Indonesia, and the Director of Bank UMKM Jatim also expressed appreciation for the contribution of the Mukmin Mandiri Islamic Boarding School. Its consistency as an annual participant in the Indonesia Sharia Economic Festival (ISEF) organized by Bank Indonesia further strengthens the strategic position of this Islamic boarding school in the development of the national sharia economy (Setiawan, Komara & Kurniawan, 2020).

As part of the community empowerment strategy, the Mukmin Mandiri Islamic Boarding School fosters more than 45 MSMEs in the Waru District, Sidoarjo. Not only providing them with religious education, this Islamic boarding school also develops project-based vocational training, with a focus on improving digital skills. The training includes creating marketplace accounts, managing social media, creating digital catalogs, and online marketing strategies Herlambang & Yudianto (2018).

This project-based approach provides opportunities for MSMEs to learn through real experiences Komara & Setiawan (2020), as well as improve technical skills, and apply knowledge in actual business situations. This model is in line with the principles of project-based learning (Anggraeni, Kurino & Mahpudin, 2019), which prioritize contextual, collaborative, and problem-solving-oriented learning.

Based on this background, this study focuses on examining the effectiveness of project-based vocational training in improving the digital skills of MSMEs fostered by Islamic boarding schools, and identifying its impact on their business performance.

2.Method

This study uses a quantitative approach with an experimental method based on project-based learning involving MSME actors fostered by the Mukmin Mandiri Islamic Boarding School. The training was conducted in three main stages: creating a marketplace account (such as Shopee, Tokopedia and Bukalapak), managing business social media (Instagram and Facebook), and creating a digital product catalog.

The research participants were 45 MSME actors who had registered at the Islamic boarding school, with diverse backgrounds in terms of entrepreneurial experience. The training lasted for 3 weeks with two sessions per week. Evaluation was carried out through a pre-test and post-test of digital skills covering digital account management and online marketing. In addition, the results of the digital projects produced by the participants were also analyzed to see whether this training could improve their ability to run a business more effectively in the digital realm.

3. Findings and Discussion

Implementation of Training

The project-based training designed in this activity begins with an introductory session aimed at instilling a deep understanding of the importance of digital skills in today's era of business transformation. In this session, participants are not only passive listeners, but also actively discuss, linking the material to their personal experiences in entrepreneurship. As an initial stage, each participant is given the opportunity to choose the type of product they want to market digitally. This selection is based on their interests, experiences, and business development potential. This process encourages the development of emotional involvement of participants in the projects they will work on, an approach that, according to Iham, et.al (2021) is important in project-based learning to increase motivation and learning independence.

After determining the product, participants enter a series of structured training sessions, including:

1. Marketplace Account Creation and Product Uploading. Participants are guided to create accounts on popular marketplace platforms, such as Shopee, Tokopedia, and Bukalapak. With practical guidance, participants directly upload their products, practicing technical skills while introducing the concept of the importance of attractive and credible product descriptions.
2. Business Social Media Account Management. In this session, participants learn to build a brand identity on social media such as Instagram and Facebook. They practice creating simple content, setting upload schedules, and understanding the basic algorithms of social media that affect marketing reach.
3. Digital Product Catalog Creation. Using simple application-based design tools such as Canva, participants are empowered to create digital product catalogs. The material is delivered with a hands-on approach, teaching the basic principles of effective graphic design for promotion.

Throughout the training, the level of participant participation showed very high enthusiasm. This was reflected in their activeness in the question and answer session, their perseverance in completing assignments, and their creativity in presenting the results of their projects. Some participants even took the initiative to develop new product variants or improve their marketing strategies based on input during the training.

Observation data and short interviews conducted during the activity support this finding. The majority of participants expressed that this project-based training method made it easier for them to understand the application of digital skills concretely in their businesses. This is in line with the theory of social constructivism (Vygotsky, 1978) which emphasizes the importance of collaborative and contextual activities in learning to build meaningful knowledge.

With this approach, training is not only a space for learning technical skills, but also an arena for the growth of participants' self-confidence, in this case MSME actors fostered by the Mukmin Mandiri Sidoarjo Islamic Boarding School, in adopting digital technology for their business development.

Table 1. Participation of UMKM Participants Fostered by Islamic Boarding Schools

Participation Aspects	Category	Participants	Percentage (%)
Full attendance	Yes	27	90%
	No	3	10%
Completion of project tasks	Yes	28	93,3%
	No	2	6,7%
Activeness in discussions	Active	25	83,3%
	Less Active	5	16,7%
New product development initiatives	There are	15	50%
	There isn't any	15	50%

To illustrate the level of participant participation in project-based training, Table 1 above summarizes the main aspects of participant engagement. Most participants showed full attendance during the training sessions, with 90% of them attending consistently. This reflects the participants' commitment to following each stage of the training thoroughly. Meanwhile, 93.3% of participants successfully completed the assigned project tasks, indicating their high motivation and involvement in applying the digital skills learned.

Activeness in discussions and interactions during the training was also a significant indicator in measuring participant engagement. As many as 83.3% of participants actively participated in the discussion sessions, while the rest were more passive. This activeness shows that the project-based training method is effective in encouraging two-way communication, allowing participants to share knowledge and gain new insights in the context of digital business.

In addition, although half of the participants showed the initiative to develop new products or improve their marketing strategies after the training, there was still an opportunity to strengthen creativity and innovation in future sessions. This success indicates a positive tendency to apply the skills acquired in their entrepreneurial context.

Pre-test and Post-test Evaluation

The results of the pre-test and post-test evaluations showed a significant increase in participants' digital skills after participating in project-based training. Based on data analysis, the average pre-test score of participants' digital skills was recorded at 40.00. After the training, the average post-test score increased to 85.00, indicating an average increase of 45.00 points.

This increase reflects the effectiveness of the project-based training method in developing participants' digital skills. Statistical test analysis (eg paired sample t-test) conducted showed that the increase was statistically significant ($p < 0.05$), which strengthens the finding that the training intervention had a real impact on participants' digital competence.

Qualitatively, participants also reported increased confidence in using various digital platforms, which is in line with the quantitative results obtained. Thus, this project-based training can be recommended as an effective approach in improving digital skills, especially in the context of human resource capacity development in the era of digital transformation.

Table 2. Average Pre-test and Post-test Scores of Digital Skills of Mentored MSME Participants

Assessment Aspects	Pre-test (Mean \pm SD)	Post-test (Mean \pm SD)	Δ (Difference)	Significance (p-value)
Digital Skills	40,00 \pm X1	85,00 \pm X2	+45,00	$p < 0,05$

Information:

Mean = average; SD = standard deviation; Δ = score change; p-value = test results paired sample t-test.

X1 and X2 are filled according to your standard deviation values.

If you are using statistical software (SPSS, R, etc.), the standard deviation usually comes out automatically.

Table 2 above shows that there is an average increase in score of 45.00 points from pre-test to post-test. The paired sample t-test shows that the increase is statistically significant ($p < 0.05$), so that project-based training is proven to be effective in improving participants' digital skills.

Digital Projects Produced by MSME Participants Fostered by Islamic Boarding Schools

All participants in this program successfully produced structured and operational digital projects. Each participant built an account on an active marketplace platform that functions as a means of transaction. In addition, they also produced a digital product catalog that can be downloaded by consumers, strengthening the promotion and online

marketing aspects. Business social media accounts were also successfully created and managed with a strategic approach, reflecting the practical application of training materials.

Interestingly, a number of participants have succeeded in selling products through the marketplace accounts they manage, indicating effective skill transfer and a direct impact on improving business performance. This finding strengthens the hypothesis that digital training-based interventions can improve marketing capabilities and the growth potential of micro-businesses. To measure the level of success of participants in producing and managing digital projects, an evaluation was conducted based on three main indicators, namely: (1) Marketplace account activation, (2) Digital product catalog preparation, and (3) Management of business social media accounts.

Table 3. Success Rate of Digital Projects of Mentored MSME Participants

Number	Indicator	Total of Successful Participants	Percentage (%)
1	Create and activate a marketplace account	30 out of 30 participants	100%
2	Create a digital product catalog	28 out of 30 participants	93,3%
3	Create and manage business social media accounts	30 out of 30 participants	100%
4	Make the first sale through the marketplace	15 out of 30 participants	50%

The results show that all participants were able to complete most of the digital project targets, with a success rate above 90% for the two main indicators. In addition, the success of 50% of participants in making their first sales transaction indicates that the training not only increases technical capacity, but also directly encourages implementation in a real business context.

Based on the data presented, the success rate of participants in implementing digital projects shows very positive achievements. All participants (100%) succeeded in creating and activating marketplace accounts, as well as actively managing their business social media accounts. This achievement confirms that the training provided was able to accommodate the needs of basic digital skills for participants, while increasing their readiness to compete in the online market.

Meanwhile, there was a slight difference in the indicator for compiling a digital product catalog, where 93.3% of participants succeeded in meeting the target. Although still relatively high, this indicates minor challenges, possibly related to variations in design or technical capabilities in catalog creation that require more intensive assistance for some participants.

The success of 50% of participants in making their first sales transaction through the marketplace indicates that half of the participants were able to translate the training into real action in the business world. Although not all participants immediately made transactions, this achievement is quite significant, considering that the market penetration stage requires time and further adaptation. This condition also reflects that in addition to technical skills, other factors such as pricing, product quality, and marketing strategies also influence sales success.

Overall, these results indicate that a hands-on practice-based training approach is effective in improving the digital capabilities of micro-businesses. This finding is in line with previous research that emphasizes the importance of experience-based capacity building in supporting digital transformation in the MSME sector (Zakki & Setiawan, 2019). Thus, this program not only has an impact on improving individual competence, but also opens up real opportunities for more sustainable business growth in the digital economy era.

Interview Results of Participants in Digital Training for MSME in Vocational Pesantren Based on Projects

The results of in-depth interviews with training participants showed that the intervention of the Islamic boarding school-based digitalization program had a positive impact on the self-confidence and digital entrepreneurial capacity of MSME actors. Participants admitted that they previously ran their businesses conventionally and were limited to the local market. However, after participating in the training, they began to understand and utilize digital technology to expand their marketing reach and increase business efficiency.

A participant, Yatik (53), said that this training had opened up a new perspective for them in utilizing digital media as a marketing tool. He said: "This training opened our eyes to how to use digital media to market products. In the past, we only relied on conventional methods, but now we can sell our products online and get many new customers."

This statement is in line with the findings of Handayani, (2023), which shows that digital literacy-based training significantly increases the capacity of MSME actors in information technology-based marketing strategies. Digital literacy such as the introduction of e-commerce which is applied directly by MSME actors including Islamic boarding schools is one of the keys to strengthening the competitiveness of MSMEs in the digital economy era (Setiawan & Ariyanto, 2025).

Peserta lain, Mia (42), menekankan pentingnya peran pesantren sebagai fasilitator pemberdayaan digital: "Di bina "This Islamic boarding school has made us advanced, we know how to use technology, we are taught to create a marketplace, and manage social media to sell our MSMEs. I happen to have a home-based sinom business." This shows a paradigm shift in the role of Islamic boarding schools from merely religious educational institutions to agents of social and economic transformation in society, as explained by Zakki, Christiananta & Koesmono, (2016) in the concept of entrepreneurial Islamic boarding schools and the concept of entrepreneurial mindset of successful women (Latukismo, Usman, Yulianti, et al, 2021), as well as the concept of innovation on entrepreneurship by Kurniawan, Setiawan & Komara, (2020), as well as the concept of small and medium enterprises in entrepreneurship initiated by Kurniawan, et al (2019) in a study of how MSMEs prepare to face the challenges of industry 5.0. Also a concept that was also developed by Beni, Setiawan & Aries (2020) in the concept of entrepreneurial based on product excellence and local wisdom.

Meanwhile, Anjani (41) noted a significant change in her business's operational system: "Previously, we were only traditional, I only sold when there was a bazaar at the Mukmin Mandiri Islamic boarding school, or when I was invited to an exhibition outside. But when I was taught e-commerce, social media, digital is the term, I was able to open an online store, receive orders from home. If the online store is open 24 hours, even when we sleep we get orders coming in." This statement shows that business digitalization not only has an impact on the marketing aspect, but also on the flexibility of working hours and distribution efficiency.

This is in line with the study by Setiawan & Ariyanto (2025), which found that MSMEs who adopted the e-commerce platform experienced an increase in turnover of up to 30% compared to conventional methods. Nisa (47), a screen printing entrepreneur, said that she previously had a social media account, but had not utilized it optimally: "My business is screen printing, actually I already have an IG account but I just scroll through it. Now I know how to develop my business using my cellphone, from social media I can sell, not just use up data packages." This quote indicates an increase in digital awareness and a shift in the function of social media from mere entertainment to a production and marketing tool. This is reinforced by research from Komara, Setiawan & Kurniawan (2020), which noted that MSMEs that actively utilize social media in their marketing strategies show higher business resilience.

Overall, participant interviews revealed that the digitalization training program implemented not only increased the technical capacity of MSME actors, but also provided psychological effects in the form of increased self-confidence and entrepreneurial motivation. The implication of this finding is the importance of the sustainability of community-based training programs, especially Islamic boarding schools, as a contextual economic empowerment node rooted in local values.

Discussion

Strengthening Digital Skills through Project-Based Learning and its Impact on Skills

The results of this study are in line with the theory of vocational education which emphasizes the importance of project-based learning to improve students' practical skills. Through the Project-Based Learning approach, participants not only learn theory, but also directly apply the skills they learn in real-world contexts.

With this approach, training is not only a space for learning technical skills (Setiawan, et.al, 2021). But also an arena for growing self-confidence of participants, especially MSME actors fostered by the Mukmin Mandiri Sidoarjo Islamic Boarding School, in adopting digital technology for their business development. As previous research has also been studied in research conducted by Setiawan & Hidayat (2021), regarding the dynamic capability of Islamic boarding school entrepreneurs, one of which is adopting digital technology as part of dynamic actions.

Activeness in discussions and interactions during training is a significant indicator in measuring participant involvement. As many as 83.3% of participants actively participated in discussion sessions, while the rest were more passive. This activeness shows that the project-based training method is effective in encouraging two-way communication, allowing participants to share knowledge and gain new insights in the context of digital business. Thus, this research confirms the results of research conducted by Nur Hidayat et al (2022), in their research entitled *Foresting Entrepreneurial Spirit of Santri With Santripreneur Academy Program: Study on Pesantrenpreneur Mukmin Mandiri*, where the activeness of participants is the key to successful learning at the academy organized by the Islamic boarding school.

The results of the pre-test and post-test evaluations showed a significant increase in participants' digital skills after participating in project-based training. Based on data analysis, the average pre-test score of participants' digital skills was recorded at 40.00, while after training, the average post-test score increased to 85.00. This increase reflects the effectiveness of the project-based training method in developing participants' digital skills. Statistical test analysis (paired sample t-test) showed that the increase was statistically significant ($p < 0.05$), which strengthens the finding that the training intervention had a real impact on participants' digital competence.

Qualitatively, participants also reported increased confidence in using various digital platforms, which is in line with the quantitative results obtained. Thus, this project-based training can be recommended as an effective approach in improving digital skills, especially in the context of human resource capacity development in the era of digital transformation.

The Impact of Practice-Based Training on MSME Digital Capabilities

The results of the study show that the practice-based training approach has a significant influence on improving the digital capabilities of MSME actors. Project-based training, which allows participants to be directly involved in the use of digital technology in real contexts, has been shown to not only improve their technical skills but also broaden their understanding of the potential of digitalization in accelerating business growth.

Digital transformation in the micro, small, and medium enterprises (MSMEs) sector in the portrait of entrepreneurship in Indonesia requires not only access to technology (Komara, et. al 2020), but also a concrete understanding and ability to apply it. In this context, practice-based training emerges as a strategic and effective approach to building the digital capabilities of MSME actors gradually but significantly.

This approach allows participants not only to understand the theory, but to experience the learning process directly through contextual and applicable practices. The results of this study show that direct practice is able to bridge the digital divide, both in terms of technical skills and in terms of changing mindsets towards digital opportunities.

Digital Skills Enhancement through Contextual Learning

Practice-based training provides an authentic learning experience by placing participants in a simulation of real digital business conditions (Ilham, Apriliyanti, Setiawan & Yazid, 2022). Participants not only learn how to create a marketplace account or upload products to social media, but also analyze consumer responses, adjust promotional strategies, and manage orders and finances digitally.

This process gradually improves their skills through a controlled trial and error cycle. As noted in the pre-test and post-test evaluations, the average digital skills score of participants increased from 40.00 to 85.00. This reflects an increase of 112.5% and is statistically significant ($p < 0.05$), strengthening the evidence that active involvement in real projects plays a major role in improving digital competence.

Digital Behavior Transformation and Self-Confidence

An equally important aspect of this training is the increase in participants' self-confidence. Most of the UMKM actors who were previously unfamiliar or even reluctant to use technology, showed enthusiasm and activeness in exploring digital features. Yatik (53), for example, emphasized that this training not only increased knowledge, but also opened up new perspectives on how technology can be a strategic business partner. This increase in self-confidence is transformative because it also influences participants' courage to experiment, take risks, and expand their business reach through digital channels.

This phenomenon is supported by literature findings stating that active project-based learning has an influence on increasing individual self-efficacy in the digital context. Increased self-confidence is an important component in sustainable technology adoption. In the context of UMKM, this self-confidence not only improves individual performance, but also becomes a lever for overall business behavior change.

Inclusivity and Contextual Relevance of Training

Another advantage of practice-based training is its ability to reach community groups that were previously less facilitated in the digital transformation agenda, such as MSME actors based on Islamic boarding schools. By involving the local context as part of the training curriculum, participants feel more connected to the material and are able to see the direct relevance between the training and their business needs. Islamic boarding schools as trusted institutions and have moral authority in the community play a role as an effective social bridge in the knowledge transfer process.

This is reinforced by the view of Mia (42), who believes that the role of Islamic boarding schools as facilitators is not only in the religious aspect, but also in empowering the digital economy. Thus, training developed in an inclusive and community-based ecosystem such as Islamic boarding schools not only increases participation, but also ensures the sustainability of the learning process due to the existence of social and cultural attachments.

Systemic Impact on the Management of MSME Businesses Fostered by Islamic Boarding Schools

Practice-based training also encourages changes in the business management system of MSME actors. Participants began to apply digital principles in inventory management, transaction recording, and measuring business performance. Anjani (41) explained how digitalization allows for efficiency of time and energy because the order and promotion systems are automatic and integrated.

This is a form of digital transformation not only on the marketing side, but also in the work system and business structure itself. This transformation is also in line with the research results of Setiawan & Ariyanto (2025), which shows that digitalization of operational management has a direct impact on increasing efficiency, data accuracy, and decision-making based on real-time information. This is an important foundation for the resilience of MSMEs amidst high market volatility in the digital era.

Adaptive Capacity and Competitiveness of MSMEs Fostered by Islamic Boarding Schools

Strategically, practice-based training strengthens the adaptive capacity of MSMEs to change. They are not only able to adopt digital tools, but also understand how to respond to market dynamics and consumer behavior trends based on data. In an interview, Nisa (47) described how she shifted from being just a social media consumer to a content producer and active business actor in the digital space.

This is a form of digital paradigm shift that touches the roots of MSME actors' way of thinking about technology from entertainment tools to productivity and business expansion tools. This kind of transformation is key to creating a resilient, adaptive MSME ecosystem that is able to compete in national and global digital markets.

By looking at the results and dynamics of the training that has been implemented, it can be concluded that a practice-based approach is not only relevant, but also crucial in building the digital capabilities of MSME actors. This approach answers the challenges of digital literacy directly, presents contextual learning, and fosters courage and confidence to transform businesses sustainably.

These findings have important implications for policy makers, business assistants, and vocational education institutions, that strategies for improving digital competence are not sufficient to be formulated in the form of lectures or theoretical modules alone, but must be realized in the form of living, collaborative learning experiences that are in accordance with the reality of business actors. Therefore, practice-based training is worthy of being used as a reference model in the national MSME empowerment program, especially in accelerating the adoption of technology in the informal sector which has so far been lagging behind digitally.

4. Conclusion

This study confirms that project-based vocational training is effective in improving the digital skills of MSME actors fostered in the pesantren ecosystem. This approach not only provides technical mastery, but also fosters self-confidence, adaptive mindsets, and digital entrepreneurial motivation. Integration of training with local values and the religious community of the pesantren encourages the formation of a participatory learning ecosystem that is relevant to the challenges of the times. Theoretically, this study enriches the study of constructivist vocational education and expands the role of pesantren as agents of digital socio-economic transformation. Practically, this model can be replicated to strengthen the capabilities of community-based MSMEs more broadly and sustainably in the era of digital transformation.

5. References

- Anggraeni, R. K., Kurino, Y. D., & Mahpudin. (2019). Implementasi pendekatan saintifik dengan model project based learning (PJBL) pada pembelajaran matematika. In Seminar Nasional Pendidikan, FKIP UNMA 2019: Literasi Pendidikan Karakter Berwawasan Kearifan Lokal pada Era Revolusi Industri 4.0 (pp. xx-xx). Fakultas Keguruan dan Ilmu Pendidikan, Universitas Majalengka.
- Bagus, H. C., M. I., Apriliyanti, M., & Yazid, M. (2022). Digital literacy and increased utilization of higher education e-learning in Indonesia: A literature review. *Library Philosophy and Practice (e-journal)*, 7052.
- Herlambang, T., & Yudianto, F. (2018). Pelatihan e-marketing di Pondok Pesantren Mukmin Mandiri Sidoarjo. *Jurnal Sistem Informasi*, 2(1), 157-xxx.
- Handayani, A. D. (2023). Digitalisasi UMKM: Peningkatan kapasitas melalui program literasi digital. *Jurnal Signal*, 11(1), 1-140. Universitas Swadaya Gunung Jati. <https://jurnal.ugj.ac.id/index.php/Signal>
- Ilham, I., Sukoco, B. M., Eliyana, A., Handriana, T., Setiawan, H. C. B., Fatimah, N., & L., T. H. (2021). Dynamic capabilities information technology enabler for performance organization. *Library Philosophy and Practice (e-journal)*. <https://digitalcommons.unl.edu/libphilprac/6129>
- Jazila, S., Fahmi, M., Prasetya, S. A., Faizin, M., & Sholihuddin, M. (2021). Pesantren dan pengembangan ekonomi dalam perspektif maqashid al-shari'ah. *Jurnal Pendidikan Agama Islam (Journal of Islamic Education Studies)*, 9(1), 83-102. <https://doi.org/10.15642/jpai.2021.9.1.83-102>
- Komara, B. D., Setiawan, H. C. B., & Kurniawan, A. (2020). Pemberdayaan santri melalui kewirausahaan dan kemampuan penguatan keunggulan produk berbasis pada kearifan lokal. *Jurnal Riset Entrepreneurship*, 3(2), 15-22. <https://doi.org/10.30587/jre.v3i2.1559>
- Komara, B. D., & Setiawan, H. C. B. (2020). Inkubator bisnis sebagai pendorong tumbuhnya wirausaha muda: Studi tentang sukseki kewirausahaan mahasiswa Universitas Muhammadiyah Gresik. *Jurnal Riset Entrepreneurship*, 3(1), 33-39. <https://doi.org/10.30587/jre.v3i1.1159>
- Komara, B. D., et al. (2020). Potret Kewirausahaan Indonesia: Pemetaan Sosial, Menjadi Pengusaha di Usia Muda, Memulai Usaha, UMKM, Digital Marketing, Strategi Bisnis di Pedesaan, Pemberdayaan Santri, Praktik Kewirausahaan di Pondok Pesantren. CV. Jakad Media Publishing. ISBN: 9786237681304.
- Kurniawan, A., Setiawan, H. C. B., & Komara, B. D. (2020). Innovation and creativity as managers BUMDesa KUEMDes driving and entrepreneurial activity village. *Innovation Research Journal*, 1(1), 40-47. <https://doi.org/10.1234/innovationresearch.2020.1.1.40>
- Kurniawan, A., Komara, B. D., & Setiawan, H. C. B. (n.d.). Preparation and challenges of Industry 5.0 for small and medium enterprises in Indonesia. *MIJEB: Muhammadiyah International Journal of Economics and Business*. Retrieved from <https://journals.ums.ac.id/index.php/mijeb/about>
- Latukismo, T. H., Usman, I., Yulianti, P., Fatimah, N., Ilham, ., Setiawan, H. C. B., & Putra, R. S. (2021). Entrepreneurial mindset of successful women from recycling waste. *Review of International Geographical Education*, 11(3), 627-635.

- Misjaya, M., Bukhori, D. S., Husaini, A., & Syafri, U. A. (2020). Konsep pendidikan kemandirian ekonomi di Pondok Pesantren Mukmin Mandiri Sidoarjo - Jawa Timur. *Educational Insight*, 8(1), 1-12. <https://doi.org/10.30868/ei.v8i01.371>
- Sakai, M., Puspitasari, D. C., Isbah, M. F., Ryandono, M. N. H., Setiawan, H. C. B., Astuti, E. Z. L., & [7 pengarang lainnya]. (2018). *Kewirausahaan sosial: Tinjauan konsep dan terapan dalam organisasi sosial Islam*. (Edisi 1). Yogyakarta: Tiara Wacana.
- Setiawan, H. C. B. (2020). *Redesign bisnis pasca pandemi Covid-19: Perspektif UMKM, BUMDes & usaha ekonomi pesantren*. Mukmin Publishing.
- Setiawan, H. C. B., & Ariyanto, S. R. (2025). E-commerce technology based business development in the digital era: Pesantrenpreneur experience. *Jurnal Ilmu Pendidikan Indonesia*, 10(1), 1–10. <https://doi.org/10.29100/jipi.v10i1.7531>
- Setiawan, H. C. B., Hidayat, N., Komara, B. D., Sukaris, & Kurniawan, A. (2021). Dynamic capability pesantren entrepreneur. *Jurnal Ilmu Ekonomi dan Perbankan*, 3(2), 45. <https://doi.org/10.35719/jiep.v3i2.45>
- Setiawan, H. C. B., Hidayat, N., Kurniawan, A., & Komara, B. D. (2022). Foresting entrepreneurial spirit of santri with Santripreneur Academy program: Study on Pesantrenpreneur Mukmin Mandiri. *Journal of Islamic Economics and Business*, 4(2), 77. <https://doi.org/10.35719/jiep.v4i2.77>
- Setiawan, H. C. B., Komara, B. D., & Kurniawan, A. (2020). Manajemen Bisnis Syariah Berbasis Kewirausahaan di Pondok Pesantren Mukmin Mandiri Sidoarjo. *SAUJANA: Jurnal Perbankan Syariah dan Ekonomi Syariah*, 2(1). <https://www.ejournal.steikassi.ac.id/index.php/111/article/view/17>
- Setiawan, H. C. B., Kurniawan, A., & Komara, B. D. (2021). Implementation of theory Z William Ouchi in pesantrenpreneur: Study on organizational culture. In *Proceedings of the 1st UMGESHIC International Seminar on Health, Social Science and Humanities (UMGESHC-ISHSSH 2020)*. Atlantis Press. <https://www.atlantispress.com/proceedings/umgeshc-ishssh-20/125961865>
- Setiawan, H. C. B., Ilham, & Fatimah, N. (2020). *Dasar-dasar kewirausahaan: Teori dan aplikasi* (H. C. B. Setiawan, Ed.). PT. Berkas Mukmin Mandiri. ISBN 9786239345211.
- Setiawan, H. C. B., & Komara, B. D. (2020). The alternative blue ocean strategy: Bagaimana strategi perusahaan industri kopi santri dalam menghadapi persaingan bisnis? *Jurnal Riset Entrepreneurship*, 3(1), 26–32. <https://doi.org/10.30587/jre.v3i1.1165>
- Vygotsky, L.S. (1978). *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press.
- Zakki, H. M., & Setiawan, H. C. B. (2019). *Capacity building for UMKM*. PT. Berkas Mukmin Mandiri. ISBN: 9786239093167.
- Zakki, M., Christiananta, B., & Koesmono, H. T. (n.d.). *Influence of strategic, spiritual and entrepreneurial leadership of the kiai to the santri's work satisfaction and to the jihad (performance) of santripreneur at the entrepreneurial pesantren in East Java Province*. Widya Mandala Catholic University.