Reslaj: Religion Education Social Laa Roiba Journal
Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

TFETF Framework Development in MOOC Based on Art-Technopreneurial

Iriaji[1], Abdul Rahman Prasetyo[2], Ike Ratnawati[3], Alby Aruna[4], Adinda Marcelliantika[5], Eka Putri Surya[6], Ginanjar Atma Wijaya[7]

Fakultas Sastra[12357], Fakultas Ilmu Pendidikan[4], Fakultas Ekonomi dan Bisnis[6]
Universitas Negeri Malang
iriaji.fs@um.ac.id[1], prasetyo.fs@um.ac.id[2], alby.aruna.2301218@students.um.ac.id[3], alby.aruna.2301218@students.um.ac.id[4], adinda2231@gmail.com[5], eka.putri.2304318@students.um.ac.id[6], ginanjar.atma.1902146@students.um.ac.id[7]

ABSTRACT

This study explores family economic empowerment through the Framework Economy of the Family (TFETF) through the implementation of the Massive Open Online Course (MOOC) through concrete-based pottery, supporting the development of creative family technopreneurs. Integrating traditional arts, entrepreneurship education and technology is the key to creating innovative human resources in the digital era. This research uses the ADDIE model to design a MOOC curriculum that facilitates collaboration in entrepreneurship and craft technology. The results of the research in the form of developing the TFETF framework obtained a media expert validation score of 91.45%, material expert validation 90%, practicality test 90%. The TFETF framework developed has proven effective in strengthening the family economy by providing adaptive learning materials, helping overcome geographic and socio-economic barriers and encouraging social inclusion and global connectivity.

Keyword: *TFETF, Massive Open Online Course, Concrete, Art-techopreneurial.*

ABSTRAK

Studi ini mengeksplorasi pemberdayaan ekonomi keluarga melalui *framework* The Framework Economy of The Family (TFETF) melalui penerapan Massive Open Online Course (MOOC) melalui gerabah berbasis *concrete*, mendukung perkembangan *technopreneur* keluarga kreatif. Mengintegrasikan seni tradisional, pendidikan kewirausahaan, dan teknologi merupakan kunci untuk menciptakan sumber daya manusia yang inovatif di era digital. Penelitian ini menggunakan model ADDIE untuk merancang kurikulum MOOC yang memfasilitasi kerja sama dalam kewirausahaan dan teknologi kerajinan. Hasil penelitian dengan wujud pengembangan *framework* TFETF mendapatkan skor validasi ahli media 91,45%, validasi ahli materi 90%, uji praktikalitas 90%. *Framework* TFETF yang dikembangkan terbukti efektif dalam memperkuat ekonomi keluarga dengan menyediakan materi pembelajaran adaptif, membantu mengatasi batasan geografis dan sosial-ekonomi serta mendorong inklusi sosial dan konektivitas global.

Kata Kunci: *TFETF, Massive Open Online Course, Concrete, Art-techopreneurial*.

Reslaj: Religion Education Social Laa Roiba Journal
Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

INTRODUCTION

Indonesia is a country rich in natural resource potential and creative crafts. One of the creative crafts is pottery. Pottery has been part of the daily life of Indonesian people for centuries. Although many traditional pottery craftsmen have not been able to optimize this potential properly. In this modern era, technology is increasingly developing rapidly. Opportunities for developing pottery crafts are becoming wider, especially collaboration between the concept of The Future Economy of The Family (TFETF) and Massive Open Online Course (MOOC) technology (Alghifari, 2020). The TFETF concept refers to the idea that providing a complete collaborative system, every family must be able to create an independent and sustainable economy, while MOOC is an online learning platform that can be accessed by anyone from anywhere. Therefore, there is a need for research that aims to create TFETF-based family independence through MOOC material through concrete-based pottery design material. The TFETF concept focuses on strengthening the family economy as an effort to build independence and long-term economic resilience (Arif & Jamaaluddin, 2020). Through this context, concrete-based pottery becomes an important aspect that every family needs to master. As a material that is easy to obtain and process, concrete can be an innovative solution to increase the selling value of pottery products, as well as create variations and innovations in this craft. Meanwhile, MOOC platforms can act as effective and efficient learning media (Aruna et al., 2022). In the course collaboration process with MOOC, material about making concrete-based pottery can be delivered widely, so that this knowledge and skills can be accessed by anyone without geographical restrictions. Apart from that, MOOCs also enable an independent and flexible learning process, according to the rhythm and needs of each individual (Christantyawati et al., 2018).

The use of MOOCs and the TFETF concept will not be optimal without art-technopreneurs. Art-technopreneur is the integration of art, technology and entrepreneurship (Ekowati et al., 2022). This does not only focus on producing concrete-based pottery through production skills, but also becomes part of art and culture that has selling value. Understanding the importance of family economic independence as the main pillar in national economic development (Vega et al., 2022), this research explores more deeply the potential for using concrete in pottery crafts and how this knowledge and skills can be disseminated through MOOCs. Concrete, as a material that is widely available and has good durability, can provide a new alternative for pottery craftsmen in creating more diverse and innovative products. The use of concrete can also increase the economic value of pottery products, as well as being a solution to reduce dependence on clay, which is increasingly available.

MOOCs enable a more democratic and inclusive learning process (Lian et al., 2021). Through MOOC, participants are limited by space, time or distance to learn how to make concrete-based pottery, without having to take physical courses which may have limited access. This is very important, especially in the midst of the COVID-19 pandemic which has pushed more activities to move online. Apart from that,

Reslaj: Religion Education Social Laa Roiba Journal
Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

MOOCs can also be a means of spreading art-technopreneur values, by emphasizing the importance of integration between art, technology and entrepreneurship in creating products that have high selling value. However, the challenge that arises is how to design and implement this MOOC material effectively (Amalia, 2020), as well as how to measure its impact on increasing family economic independence. In an effort to achieve this goal, this research will use qualitative and quantitative approaches. A qualitative approach will be used to understand the process and dynamics of making concrete-based pottery through a series of needs data analysis and data interpretation. Meanwhile, a quantitative approach will be used to measure the level of increase in skills and knowledge after participating in the MOOC, as well as its impact on increasing the family's economic independence. This research will also involve families who are targets for implementing the TFETF concept, to ensure that the results of this research are relevant and can be applied in real life contexts. It is hoped that the results of this research will provide a clear and comprehensive picture of the potential for implementing the TFETF concept through MOOC in the concrete-based pottery industry. Apart from that, it is also hoped that this research can provide concrete and practical recommendations to support the application of this concept in the future. Overall, this research seeks to fill existing knowledge gaps and create a family independence model that is sustainable and relevant to the future economic context (Dwiningsih & Harahap, 2022).

RESEARCH METHOD

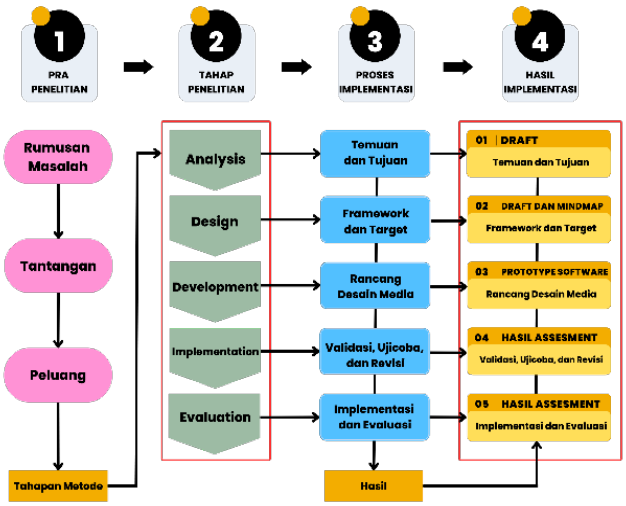

Figure 1. ADDIE Instructional Model

Instructional Stages

1. Analysis

An in-depth study was conducted to identify the needs, preferences and expectations of learners in the MOOC context. Instructional needs, demographic and psychographic characteristics of participants, and factors that may influence teaching

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

and learning effectiveness were analyzed in detail. Apart from that, content and curriculum analysis is also carried out to ensure quality standards and relevance of learning materials.

2. Design

Covers the structural and functional design process of the TFETF framework. Detailed instructional design, including the establishment of learning objectives, selection of teaching strategies, and appropriate evaluation tools, is carefully structured. The integration of Art-Technopreneurial aspects in learning content and activities is also the main focus at this stage.

3. Development

Demand the transformation of the instructional design that has been prepared into a prototype TFETF framework. Continuous implementation and revision are carried out based on test results and feedback from expert validators to ensure the effectiveness and efficiency of the framework in delivering learning material.

4. Implementation

The TFETF framework is applied in a real MOOC environment. Preparation and training for instructors, facilitators and students is carried out to ensure that all parties have the necessary competence and readiness to implement and navigate the framework. Technical and pedagogical support is also provided throughout the learning process.

5. Evaluation

The effectiveness, efficiency and impact of the TFETF framework are evaluated. Qualitative and quantitative data collection and analysis was carried out to measure the achievement of learning objectives, student satisfaction and engagement, as well as the relevance and applicability of Art-Technopreneurial aspects in the MOOC context. The results of this evaluation will form the basis for revision and refinement of the framework, to ensure that it continues to be relevant, responsive, and has a positive impact on students' learning experiences and outcomes.

Data Collection

An organized and thorough quantitative and qualitative data collection process was used. The triangulation method was used to ensure the depth and reliability of data for qualitative aspects. A semi-structured interview was conducted with program participants to find out how relevant and effective the course was. Learning experiences and their impact on technological and entrepreneurial skills were discussed in focus group discussions. Contextual data on the practical application of the acquired knowledge and skills is provided by direct observation of course participants' participation and interactions. On the quantitative side, research

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

variables such as increasing participants' skills, knowledge and readiness in the arts technology business are measured through structured surveys and scale-designed questionnaires. Multivariate statistical methods are used to analyze numerical data to identify causal and correlational relationships between variables. In addition, an analysis is carried out to find out how effective the program is in achieving its goals. This effort ensures data integrity and validity of findings, data documentation is prepared strictly and systematically. This qualitative and quantitative analysis provides an empirical foundation for evaluating MOOC implementation within the TFETF framework. This analysis emphasizes the successes, difficulties, and opportunities for innovation and improvement in the technopreneur arts family empowerment approach.

Data Analysis

Media Validation Test and Material Validation Test

$$V.ah = \frac{TSe}{TSh} \times 100\%$$

Description:
V.ah. : Expert validation
TSe : Total Empirical Score
TSh : Total Expected Score

After carrying out the validation test analysis, to find out the conclusions that have been reached are as in Table 1. Media eligibility criteria:

Table 1. Media Eligibility Criteria

Achievement Level (%)	Classification
81-100	Very Worth It
61-80	Worthy
41-60	Decent Enough
21-40	Not Worth It
0	Not feasible

Practicality Test

Practicality test data was obtained by filling in an assessment instrument consisting of 10 statement items. Practicality data is analyzed by percentage using the following formula:

$$Practicality\ Score = \frac{Total\ score\ obtained}{Total\ maximum\ score} x\ 100\%$$

After the practicality percentage is obtained, the interpretation of the practicality level assessment can be seen in Table 2.

Reslaj: Religion Education Social Laa Roiba Journal
Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

Table 2. Practicality Criteria

Practicality Score	Criteria
86% – 100%	Very Practical
76% – 85%	Practical
60% – 75%	Quite Practical
55% – 59%	Less Practical
≤ 54%	Very Impractical

HASIL DAN PEMBAHASAN

Framework The Future Economy of the Family

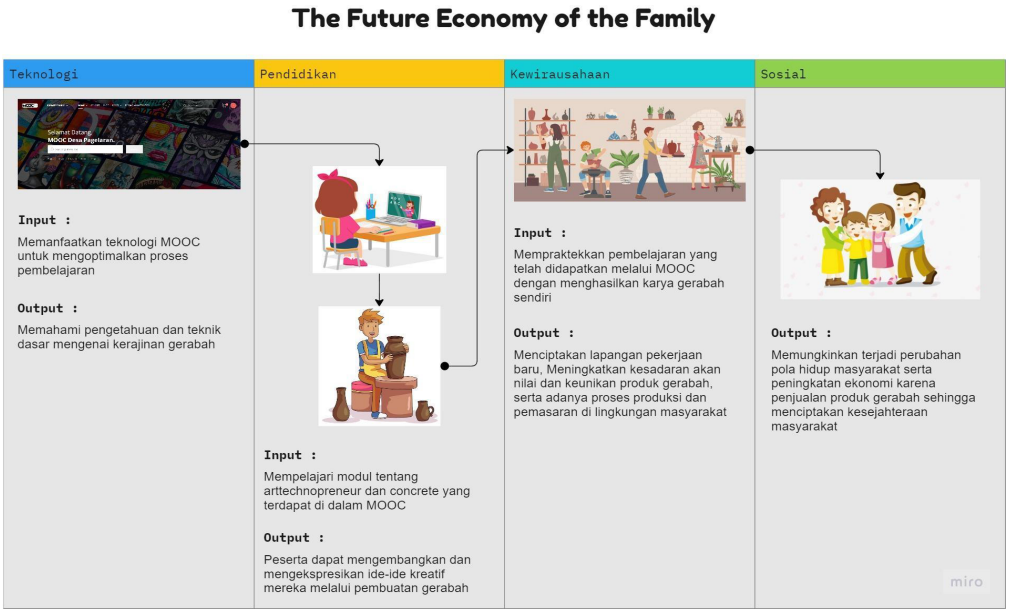

Figure 2. Framework

TFETF framework with efforts to integrate technology, education, entrepreneurship, sustainability, connectivity and accessibility. This research helps develop an economic framework for the family's future. The focus of this approach is to combine essential elements that will form the basis of a strong, inclusive and sustainable economy. This research utilizes MOOCs in the context of technological innovation to optimize the learning process and knowledge transfer and bridge the gap between practical application and theory (Khairi et al., 2022). It also shows how digital technology can be used to improve and expand access to high-quality education and skills training. The important role of environmental sustainability is the focus of research on concrete-based pottery crafts (Gultom & Tamara, 2022).

This process provides a breadth of work and ideas on the effective use of resources, innovation in materials and production methods that reduce negative impacts on the environment, in line with green economy principles. A comprehensive

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

MOOC curriculum design conveys educational objectives and skills according to theoretical knowledge with practical applications that enable participants to gather relevant and applicable skills in an arts technopreneurial environment (Sumarno, 2010)(Sumarno & Gimin, 2019). TFETF combines elements of entrepreneurship to help people and families innovate, discover and exploit opportunities, and manage and reduce risk, which are critical components in a dynamic entrepreneurial environment. However, social inclusion and global connectivity are outlined as key pillars. Their scalability and ease of access, MOOCs encourage broader participation and diversification, create a worldwide network of learning and collaboration, support integration and adaptation to worldwide needs and trends, and ensure that this transformation can be enjoyed by a wider sector of society (Sangaji et al., 2019).

TFETF is considered an ideal framework because it can integrate various variables that influence family economic dynamics (Purwantini et al., 2020). This framework offers an interdisciplinary approach that incorporates sociocultural, entrepreneurial, educational, and technological elements. Education and training are the main drivers of family economic growth and adaptation in TFETF. Specifically, in this research, the implementation of MOOCs and other learning media is seen as a potential tool for improving families' economic literacy and skills, giving them the tools to navigate in an increasingly competitive and complex economic environment. Technology has the ability to accelerate access to information, knowledge and markets while enabling families to innovate and compete on a wider scale (Hariyanto et al., 2023). At the macro level, TFETF also emphasizes the role of entrepreneurship in encouraging family economic growth. This framework provides insight into how entrepreneurship can be embedded and developed within the family structure and how innovation and creativity can be combined to generate added economic value. TFETF also pays attention to in-depth sociocultural aspects (Hamdan, 2018). According to this research, non-economic factors such as social norms, values and habits greatly influence a family's economic success. Therefore, the goal of this framework is to determine how these components can be used or enhanced to support family financial goals. TFETF helps in discovering and understanding complex variables and components that influence the family economy through an integrated and holistic approach. It offers an in-depth and varied paradigm for developing innovative, evidence-based approaches and interventions, aimed at increasing the capacity, well-being and economic sustainability of families in the long term (Prasetyo et al., 2021).

Reslaj: Religion Education Social Laa Roiba Journal
Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

Types of Implementation and Evaluation Media

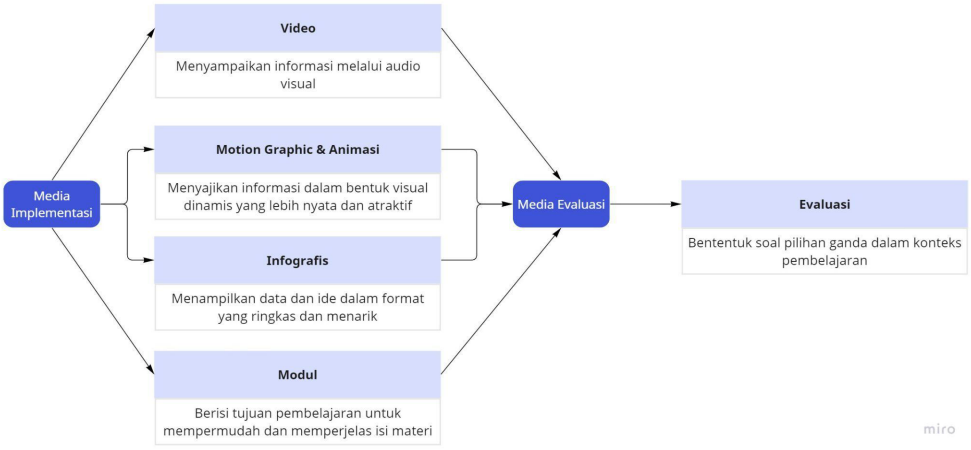

Figure 3. Integration between Implementation Media and Evaluation Media

Integration of various media and evaluation methods is very important to achieve optimal learning outcomes. This study evaluates and records how media such as video, motion graphics, animation, infographics, modules, and evaluation tools in the form of multiple-choice questions are used in learning. Video media functions as the main tool to convey basic concepts through visual and auditory methods, which helps students understand information better. Motion graphics and animation, with their dynamic visual power, improve information retention by presenting conceptual abstractions in a more tangible and interactive form. Infographics function as a medium for summarization and revision that displays data and ideas in a concise and attractive format. The presence of other media allows students to consolidate student understanding and find important areas that need attention. Each infographic is created based on ideas and data presented in videos, animations and motion graphics, so the content is consistent and focused on important components of the curriculum. Learning modules (Nagel, 2016), concepts, theory and practice are provided systematically and logically, with visual references from videos, motion graphics, animations and infographics. The organized structure of learning materials provides context and storyline for the integration and application of visual media. Students' conceptual understanding, application, and analysis, multiple choice tests are used. The evaluation instrument is created by considering the material and concepts taught in the module and learning media, so that the evaluation reflects the learning objectives. The correlation between media and evaluation underscores an integrative and holistic approach to instructional design. Each media component and evaluation approach works together to ensure that learning is flexible, responsive, and focused on providing the best learning outcomes for students in a diverse and dynamic environment (Susanti et al., 2023).

Learning methods using various media and evaluation methods are still the main focus in the academic and research fields. This research is collaborative in the integration and synergy between components such as videos, animations, graphic

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

movements, infographics, modules and multiple-choice questions in the learning context. Each media component is designed and used based on basic pedagogy. Video-based learning media uses strong educational principles to provide initial context and visual exploration of important ideas. Relevance of content, visual quality and effectiveness of information presentation are thoroughly considered to ensure effective knowledge transmission. Motion graphics and animation develop and expand the material presented in the video. Complex and abstract concepts are depicted and brought to life through dynamic and interactive visualization, improving students' understanding and retention of information. Analysis of specific learning needs allows customization and adaptation of content. Infographics combine the important elements of video, motion graphics, and animation, as well as modules to communicate information clearly and effectively. It supports students in the process of revision and reflection by integrating data, statistics and key information in an engaging and accessible visual format. All other media components are integrated into the learning module, which serves as the basic framework. This structure, content, activities, and evaluations are intended to enhance students' understanding, analytical skills, and practical application of knowledge. The module is enriched with visual media to support variability in learning styles and increase student engagement. Multiple choice questions, which are an integrated evaluation method, are designed to test and confirm student understanding. This question is built based on psychometric principles, which ensure the reliability and validity of the measurement. Analysis of the results of this evaluation provides empirical data for continuous improvement in the use of learning media and curriculum design. All components of this learning ecosystem, from media to evaluation, are carefully structured and aligned to create a cohesive, comprehensive, and responsive learning experience. With its rich data and analysis, this research aims to make a substantive contribution to the pedagogical literature and educational practice, emphasizing how media and evaluation can be integrated in innovative and structured ways to improve learning (Saputro et al., 2022).

Data Analysis

Data analysis is an important part of this, this study looks at how concrete-based pottery MOOC materials influence the independence of senior technopreneur families. Details of research data analysis in the form of main data were collected through questionnaires distributed to families taking part in the concrete pottery MOOC. The focus of this questionnaire is to determine the family's perception of the impact of training on their independence. The data was then analyzed descriptively to determine respondents' responses to the questionnaire, frequencies, proportions and other statistics were used. This analysis provides a general picture of how families see the effectiveness of MOOCs in creating arts technopreneur-based family independence.

Qualitative data was collected through interviews with several families who took part in the MOOC to gain a good understanding of the families' experiences when

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

following the training material. Content analysis was conducted on interview transcripts, to explain the impact felt by families by extracting common themes, patterns and important quotes from the transcripts. This analysis provides more detailed and in-depth insight into the changes experienced by families as they develop into arts technopreneurs. This research also uses secondary data consisting of literature studies and other sources of information related to the research subject. This information is used to build a theoretical framework and support research results. The secondary data analysis method is carried out by identifying and summarizing information that is relevant to the research objectives. TFETF in the process of secondary data analysis helps explain the context and problems of family independence. To provide a complete picture of data analysis in this research, secondary data, questionnaires and interviews were combined. The results of data analysis show that the majority of respondents think that the concrete-based pottery MOOC has a positive impact on family independence. Most families said that the artistic and technological skills applicable to their craft ventures had improved, as well as that the MOOC had given them insight into business opportunities related to concrete-based pottery. Data shows that MOOCs have been successful in helping families become senior technopreneurs by providing relevant skills and knowledge.

Media Validation

Based on the empirical scores related to all aspects of the media, a score of 184 out of a total expected score of 200 was obtained. If interpreted in percentage form, a result of 91.45% was obtained with very feasible criteria. The results of the analysis for each aspect of the media validation assessment are presented in Table 3.

Table 3. Results of Media Validation Analysis

No	Aspect	Empirical Score	Expectation Score	%	Criteria
1	Technical Quality	58	60	96,6%	Very Worth It
2	Design and Appearance	55	60	91,6%	Very Worth It
3	Content Quality	37	40	92,5%	Very Worth It
4	Interactivity	34	40	85%	Very Worth It
Average				91,45%	Sangat Layak

Materi Validation

Based on the empirical scores related to all media aspects, a score of 108 was obtained from a total expected score of 120. If interpreted in percentage form, a result of 90% was obtained with the criteria being valid, interesting and suitable for use. The results of the analysis for each aspect of the material validation assessment are presented in Table 4.

Reslaj: Religion Education Social Laa Roiba Journal
Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

Table 4. Results of Material Validation Analysis

No	Aspect	Empirical Score	Expectation Score	%	Criteria
1	Feasibility of Presentation	28	30	93	Very Worth It
2	Suitability of content and material	27	30	90	Very Worth It
3	Completeness and accuracy of information	27	30	90	Very Worth It
4	Relevance to current developments	26	30	86,6	Very Worth It
Average				90%	Sangat Layak

Practicality Test Analysis Results

Based on the results of the analysis of the results of filling out the practicality assessment instrument, the total score obtained was 900 and the maximum total score was 1000. So the overall average result was 90%. When referring to the table of practicality criteria, media practicality is at a very practical level.

Discussion

This research also seeks to create a concept for developing art-technopreneurs in the pottery craft industry with the mission of independent families through the TFETF framework (Yogi & Jamaaluddin, 2022). Art-technopreneur is a concept that combines art, technology and entrepreneurship. By implementing this concept, it is hoped that each family will not only be able to create quality pottery craft products, but will also be able to utilize technology. Apart from that, by mastering entrepreneurial skills, each family is also expected to be able to run this pottery craft business independently and sustainably (Sumarno & Gimin, 2019). However, it needs to be acknowledged that the application of the TFETF, MOOC and art-technopreneur concepts is not without challenges. This research is not only relevant for pottery craftsmen and families in Indonesia as novice (or prospective) pottery producers.

Families must gain independence in the rapidly developing economic era of the future. TFETF's approach, which centers on developing arts technopreneur skills, can help people become self-reliant. Accommodating material in a MOOC about pottery made from concrete is one effective way to achieve this independence. This material will help families develop artistic and technological skills and open up profitable business opportunities (Ramdani et al., 2022). First of all, it is important to understand why TFETF-based independence is relevant for the economy of the future. Families must have skills that suit the demands of the growing job market in an era where technology continues to develop and traditional jobs are replaced by automation (Setiawan et al., 2021). An effort to face complex economic challenges and create its own jobs, TFETF's approach focuses on developing artistic and technological skills. Therefore, TFETF-based independence gives families an edge in facing an innovative and skilled future.

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

Concrete can be used to make various handicraft products because it is a common and easily accessible material. This MOOC gives families the opportunity to learn basic techniques in making pottery using concrete, such as mixing materials, molding, and finishing. Additionally, this MOOC has the ability to collect data on interesting product designs and the latest craft industry trends. Technology and art have tremendous potential to create profitable business opportunities (Ramdani et al., 2022). Families can create unique and visually appealing products with artistic skills, while technology allows them to promote and sell their products through online platforms and digital marketing. In this digital era, technological skills also enable families to utilize various tools and platforms that can increase the efficiency of production, distribution and promotion of their products (Prihadi, 2019).

Families can develop artistic and technological skills that can be applied in various fields through MOOCs, concrete-based pottery is one of them. They can make various types of pottery, such as table lamps, wall hangings, flower vases, and other decorative accessories. They can create products that have market appeal and provide added value to consumers by mastering unique techniques and designs. Additionally, the MOOC gives families the opportunity to explore business opportunities related to concrete-based pottery. They can start a home business by selling their homemade pottery products online via e-commerce platforms or social media (Iriaji et al., 2022). Additionally, they may consider collaborating with local decoration stores or participating in arts and crafts fairs to expand their market. Families can build an additional source of income or even develop a successful craft business by combining artistic skills, technological talents, and an entrepreneurial spirit. In addition to economic benefits, MOOCs have good social effects.

Overall, this research attempts to answer the challenges in this digital era by providing alternative solutions in creating family economic independence. This research hopes to be a stepping stone for further development in this field, as well as providing an important contribution to knowledge and practice regarding TFETF-based independence, the use of MOOCs in education and training, and the application of the art-technopreneur concept in the craft industry. Finally, through an innovative and holistic approach, this research hopes to show how technology and innovation can be used to strengthen local craft industries and support sustainable family economic development (Purnamasari et al., 2023). Apart from that, this research also has the potential to become a model for other countries in facing similar challenges. By utilizing technology and art-technopreneur principles, the TFETF framework shows how countries can utilize their traditional craft industries as a source of sustainable economic growth. Overall, the TFETF framework shows how innovation and technology can be used to encourage family economic independence, advance the craft industry, and achieve sustainable development goals.

Through further context, the TFETF framework also contributes to global efforts to achieve the United Nations' Sustainable Development Goals (SDGs), in particular goal 8 on decent work and economic growth, and goal 9 on industry,

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

innovation and infrastructure. Through the process of encouraging family economic independence and innovation in the craft industry, the TFETF framework plays a role in encouraging inclusive and sustainable economic growth, as well as promoting sustainable industrialization and generating jobs (Zulfikri & Rijal, 2023). Apart from that, this research also has the potential to become a model for other countries in facing similar challenges. By utilizing technology and art-technopreneur principles, the TFETF framework shows how countries can utilize their traditional craft industries as a source of sustainable economic growth. Overall, the TFETF framework shows how innovation and technology can be used to encourage family economic independence, advance the craft industry, and achieve sustainable development goals.

The potential application of the TFETF framework is also expected to build a strong collaboration network between the various parties involved, including pottery craftsmen, MOOC experts and supporting collaborator experts (Prihadi, 2019). The establishment of this network is not only important to support performance implementation, but also to ensure that the results of the TFETF framework can be maintained and applied sustainably after the research is completed. Therefore, the TFETF framework will also include strategies to build and maintain these partnerships (Surya et al., 2021), as well as to facilitate the ongoing transfer of knowledge and skills between all parties involved. In addition, this research also recognizes the importance of involving the wider community in the research process. Through a participatory approach, this research seeks to ensure that the voices and perspectives of the community, especially pottery craftsmen and families who are the targets of implementing the TFETF concept, are represented in the research. This approach is also important to ensure that the TFETF framework is relevant to community needs and context (Komara et al., 2019). This has become an effort to encourage ongoing dialogue and discussion on relevant topics, both among academics, practitioners and the general public. This research hopes to spark new thinking and innovation in the fields of TFETF, MOOC, and art-technopreneur, as well as to contribute to the formation of policies and practices that support family economic independence and the growth of the craft industry in Indonesia (Arista et al., 2022).

The TFETF concept, which is incorporated in the Massive Open Online Course (MOOC) (Alghifari, 2020), is the focus of this research. The main aim of this MOOC is to build an independent art-technopreneur-based family by developing skills to make pottery made from concrete. The goal of MOOCs is to provide families with access to education and training related to upcoming economic demands and to create profitable business opportunities. This MOOC will teach families the basic techniques of making pottery with concrete. The lesson material will cover the process of mixing materials, making and finishing, as well as product design that is attractive and in accordance with the latest craft industry trends (Wininatin, 2021). Families will also be taught about art and technology, and how both can be used to make interesting

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

pottery products. MOOCs can give everyone access, including families who might utilize concrete-based crafts to make money.

This study shows that more families will have the opportunity to gain the knowledge and skills necessary to take advantage of these opportunities. Second, the TFETF framework helps families' economic growth and helps them achieve financial independence. Families can make products that are beautiful and have high aesthetic value by combining elements of art and entrepreneurship (art-technopreneurial) (Hairunisya, 2023). They will also learn how to market and sell their products in a profitable way. Third, MOOC optimizes the TFETF framework which provides great flexibility in terms of learning time and location (Oktarini et al., 2018). This is especially important for families who may have limited time or access to conventional educational facilities. Additionally, MOOCs enable collaborative and community-based learning, allowing family members to learn from each other and build networks with the wider community (Karyati et al., 2020). Finally, the TFETF and MOOC frameworks combine conventional and modern approaches to family empowerment. While MOOCs offer innovative, technology-based teaching and learning methods, the TFETF framework values and supports traditional knowledge and skills, such as concrete-based crafts.

Learning materials designed systematically and structured will be provided to families through this MOOC. This material will be presented in various forms, such as practical assignments, interactive learning modules, and video tutorials. Families will have the opportunity to learn independently and use the knowledge gained to make pottery from concrete (Tubastuvi et al., 2021). Additionally, this MOOC will give families the opportunity to interact and work together. They can share experiences, knowledge and ideas with other families taking part in the MOOC, and this discussion and collaboration can improve the quality of learning, broaden horizons, and encourage the exchange of ideas and innovation in the process of making concrete-based pottery. Additionally, this MOOC will help and guide families to utilize the knowledge and skills they have acquired. They will be provided with knowledge about various business opportunities in the craft industry, such as collaborating with local decoration shops, selling goods through e-commerce platforms, or participating in arts and crafts exhibitions (Yana, 2014).

Long-term participation, MOOCs consisting of concrete-based pottery, have the capacity to encourage creative economic growth at the family and community level. Through the process of increasing the number of families involved in the craft industry, it is possible that the production and sales of pottery made from concrete will increase. This has the impact of driving local economic growth, creating jobs and increasing the capabilities of local communities. The success of the concrete-based pottery MOOC in achieving TFETF-based independence is very important. Through important aspects of the TFETF framework (Zulfikri & Rijal, 2023), this research will discuss various important aspects, starting from the introduction of Massive Open Online Courses (MOOC) and its importance in education and training, to how MOOC

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

can be integrated in the pottery making process concrete based. Overall, this research offers an opportunity to bridge the gap between technology and tradition, creating a synergy between these two elements that can produce significant benefits for families and communities.

All media elements received a very good score based on empirical scores, with a score of 184 out of 200 expected scores. This shows how effective and feasible the media is for providing quality and educational learning experiences. Through a numerical score of 91.45%, the TFETF framework shows that this learning media is in the very rich category. Each element evaluated includes instructional design, content quality, interactivity, and adaptability of the media to support the different learning styles of students. Each of these elements is analyzed thoroughly to determine the extent to which media can help students achieve their learning goals and help them retain and use their knowledge. A score of 184 indicates good integration between design and media use. Ensuring that students can follow and understand the content effectively, the content is presented in a clear, systematic and coherent manner. Media interactivity is also of particular concern because its features and functions support active participation and student involvement. Media can be tailored to individual learning needs and preferences (Kusumajati et al., 2022), maximizing learning outcomes. This very feasible criterion provides strong evidence that this learning media not only meets qualitative and quantitative requirements, but also has the ability to improve the quality and effectiveness of the teaching and learning process. As a result of this validation, there is great confidence that when learning media are implemented, they will greatly help achieve learning goals, improve students' abilities, and overall enrich and improve the educational ecosystem within the TFETF framework.

The results of material expert validation on the learning media used in this research show that they have significant quality and effectiveness. This media has demonstrated its feasibility empirically and demonstrated consistency with quality standards and educational expectations with a score of 108 out of 120 expected scores. This learning media meets the "valid" criteria, because a score of 108 indicates 90% of the total expected score. This shows that the content has been provided correctly, is relevant, and meets the targeted learning objectives successfully. In addition, the neatness of the materials and the quality of the didactic content demonstrate high academic integrity, which is in line with modern educational standards. Based on the "interesting" criteria found in this evaluation, the media's success in combining aesthetic and interactive elements. This increases learner participation, curiosity, and retention in addition to optimizing knowledge transfer. To make the learning process broader and more impactful, media design and presentation have been designed to encourage students' cognitive and emotional engagement. Success in achieving the "fit for use" criteria is additional evidence of the quality and relevance of this learning media. These achievements, based on strict evaluation standards, demonstrate the effectiveness of media as an instructional tool.

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

This research shows an extraordinary level of effectiveness. Based on the data collected, the total score obtained was 900 out of 1000, indicating a practicality level of 90%. This shows great success in integrating learning methods. Practicality evaluation is based on predetermined standards and measured through carefully designed assessment tools. Completeness of material, ease of access, application in the real world, and level of participation and learning interactivity are some of the criteria. Each component is evaluated to determine how well the learning method can meet students' needs and expectations in an arts technopreneurial context. Results with a score of 90% indicate good acceptance and favorable responses from participants to the learning materials and methods. This shows that the learning content and structure present information clearly, accurately and relevantly, and enable participants to internalize and use the skills and knowledge they have acquired effectively. The results of this practicality test validate the effectiveness of MOOCs in the TFETF context and show that they have great potential to support the technopreneurial empowerment of families. These findings also provide a strong empirical basis for further incorporating technology-based learning methods into family economic empowerment strategies, as well as enabling follow-up research to study more facets and facets of this phenomenon in the broader context of the industry. This research validates that innovative educational technologies should be incorporated into family education strategies, especially within the TFETF framework to open space for additional research aimed at expanding and deepening the understanding of the components that influence the effectiveness and efficiency of this teaching method in the specific context of concrete-based pottery crafts and empowering creative technopreneur families.

CONCLUSION

This study makes an important contribution to family economics, education, and entrepreneurship, by showing how the TFETF framework can advance family economic development through MOOCs, focusing on pottery skills. MOOCs are successful in providing educational materials that can be accessed flexibly, with learning modules, visual media, and in-depth evaluation. This indicates the effectiveness of TFETF in encouraging an inclusive, creative and sustainable family economy. With MOOCs, access to entrepreneurial knowledge and training becomes broader, breaking down socio-economic and geographic barriers, and showing how digital education can strengthen families at multiple levels.

ACKNOWLEDGEMENT

We would like to thank the activity implementers, the 2023 State University of Malang non-APBN funding sources, and all activity implementers for their extraordinary efforts and support to achieve this community service goal. This activity will not be successful without hard work, cooperation and commitment without conflict between research members.

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

DAFTAR PUSTAKA

Alghifari, A. N. (2020). Pengembangan Massive Open Online Course (Mooc) Modul Certificate Dan Ceremony. *Universitas Islam Indonesia*, 7.

Amalia, Y. S. (2020). Dasar-dasar Pengenalan tentang Massive Open Online Course (MOOC). *Airlangga University Press*.

Arif, M., & Jamaaluddin, J. (2020). Peran Entrepreneur Dalam Perekonomian Dan Kemajuan Bangsa. *Pewira Usaha Sebagai Penopang …*, *Aasec*, 1–5.

Arista, M., Sadjiarto, A., & Santoso, T. N. B. (2022). Pengaruh Motivasi Belajar dan Teman Sebaya terhadap Kemandirian Belajar Pelajaran Ekonomi pada Pembelajaran Daring di Masa Pandemi. *Jurnal Basicedu*, *6*(4), 7334–7344. https://doi.org/10.31004/basicedu.v6i4.3499

Aruna, A., Iriaji, I., & Rini, D. R. (2022). Digital Learning Media for Cultural Arts Class-Vii Prototype Curriculum Integrated 6C and Tpck. *International Conference on Art …*. http://conference.um.ac.id/index.php/icadecs/article/view/7921%0Ahttp://conference.um.ac.id/index.php/icadecs/article/viewFile/7921/2367

Christantyawati, N., Sufa, S. A., Susilo, D., & Putranto, T. D. (2018). Metamorfosis Media Komunikasi Pemasaran Produk Hasil Usaha Mikro Kecil dan Menengah (Dari Media Komunikasi Pemasaran Konvensional Menuju Media Komunikasi Pemasaran Digital pada Sentra Industri Aneka Keripik di Kabupaten Tuban). *Terapan Abdimas*, *3*(2), 91–96.

Dwiningsih, N., & Harahap, L. (2022). Pengenalan ekonomi sirkular (circular economy) bagi masyarakat umum empowerment : jurnal pengabdian masyarakat. *Empowerment: Jurnal Pengabdian Masyarakat*, *1*(2), 135–141.

Ekowati, M. A. S., Wening, S., Dananti, K., Dorestia, A. K., & Kristanto, I. N. (2022). Inovasi Desain Dan Teknologi Digital Pada Penjualan Produksi Gerabah UMKM Di Pagerjurang Bayat Klaten Menuju Go Internasional. *COMMUNITY Jurnal Pengabdian Masyarakat*, *2*(3), 134–143. http://journal.stiestekom.ac.id/index.php/Community/article/view/274

Gultom, P., & Tamara, P. (2022). Analisis Teknologi Dalam Industri Kecil Kerajinan Gerabah. *Industri Inovatif : Jurnal Teknik Industri*, *12*(2), 127–133. https://doi.org/10.36040/industri.v12i2.4553

Hairunisya, N. (2023). Kewirausahaan Berbasis Proyek dan HOTS untuk Pengembangan Sumber Daya Manusia. *Unisma Press*.

Hamdan, H. (2018). Industri 4.0: Pengaruh Revolusi Industri Pada Kewirausahaan Demi Kemandirian Ekonomi. *Jurnal Nusantara Aplikasi Manajemen Bisnis*, *3*(2), 1. https://doi.org/10.29407/nusamba.v3i2.12142

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

Hariyanto, Iriaji, Prasetyo, A. R., Vega, B. L. A., Marcelliantika, A., Aruna, A., Surya, E. P., & Taufani, A. R. (2023). Pagelaran Smartland: Using Virtual Reality Media to Increase Hybrid Tourist Visits for the Pottery Industry. *KnE Social Sciences*, *2023*, 277–284. https://doi.org/10.18502/kss.v8i15.13942

Iriaji, I., Prasetyo, A., Taufani, A., Surya, E., Vega, B., Marcelliantika, A., & Aruna, A. (2022). DEVELOPMENT OF NFT ARTWORK BASED ON LOCAL CULTURAL ASSETS IN PAGELARAN VILLAGE. *International Conference on Art, Design, Education and Cultural Studies (ICADECS)*, *4*(1). http://conference.um.ac.id/index.php/icadecs/article/view/7917

Karyati, D., Budiman, A., Rohayani, H., & Sunaryo, A.-. (2020). Model Home Industri Seni : Studi Hasil Pelatihan Pembuatan Busana Tari Dalam Membantu Kemandirian Ekonomi Keluarga. *Journal of Education, Humaniora and Social Sciences (JEHSS)*, *3*(2), 682–692. https://doi.org/10.34007/jehss.v3i2.395

Khairi, A., Kohar, S., Widodo, H. K., Ghufron, M. A., Kamalludin, I., Prasetya, D., Prabowo, D. S., Setiawan, S., Syukron, A. A., & Anggraeni, D. (2022). Teknologi Pembelajaran: Konsep dan Pengembangannya di Era Society 5.0. *Penerbit NEM*.

Komara, B. D., Kurniawan, A., & Setiawan, H. C. B. (2019). PROSES PENGEMBANGAN KEWIRAUSAHAAN DI PERGURUAN TINGGI MELALUI KEWIRAUSAHAAN INTELEKTUAL. *E – Jurnal Riset Manajemen*, *8*(3), 130–139.

Kusumajati, T. O., Kusuma, S. E., Fridayani, J. A., Diva, M. A., & Pranatasari, F. D. (2022). Rumusan Rencana Tindak Lanjut Sebagai Upaya Kolaboratif Anggota Credit Union Dalam Penguatan Ekonomi Produktif. *Abdimas Altruis: Jurnal Pengabdian Kepada Masyarakat*, *5*(2), 40–46. https://doi.org/10.24071/aa.v5i2.4504

Lian, B., Oksatianti, B. R., Risdianto, E., & Mayub, A. (2021). Need Analysis of MOOCs-Based Learning Media Development to Improve Student Motivation. *AL-ISHLAH: Jurnal Pendidikan*, *13*(2), 868–873. https://doi.org/10.35445/alishlah.v13i2.646

Nagel, P. J. F. N. (2016). Pengembangan Jiwa Dan Kecerdasan Wirausaha Untuk Kemandirian Bangsa. *Seminar Nasional IENACO*, *2337–4349*, 576–582.

Oktarini, D., Suryani, F., Rosidah, M., & Saputra, D. (2018). Implemetasi Green Productivity Dalam Usaha Peningkatan Produktivitas Industri Kerajinan Gerabah Tradisional. *... : Jurnal Ilmiah Teknik ...*, *3*(2), 1–9. https://jurnal.um-palembang.ac.id/integrasi/article/view/1269

Prasetyo, A. R., Aruna, A., Ishlah, N. F. P., & Sayono, J. (2021). *Incubation and Optimization of Visual Assets of Micro-Start-Ups Through Asset-Based Community Development Design Training*. *4*(4). http://files/8325/Prasetyo et al. - 2021 - Incubation and Optimization of Visual Assets of Mi.pdf

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

Prihadi, W. R. (2019). Model Teacherpreneur Pada Pembelajaran Vokasi Menghadapi Era Disrupsi Dan Revolusi Industri 4.0. *Jurnal Pendidikan Teknik Sipil*, *1*(1). https://doi.org/10.21831/jpts.v1i1.28274

Purnamasari, I., Winarno, A., Irawan, D., Aruna, A., & Surya, E. P. (2023). Pengembangan Brand Guideline Merk Industri Susu Lokal. *CARADDE: Jurnal Pengabdian Kepada Masyarakat*, *6*, 68–78.

Purwantini, A. H., Hermawan, C. A., Nugraheni, D. S., Annisa, M. R., Kurniawan, R., & Tanafi, D. I. (2020). PPMT Pemberdayaan KWT Sakinah Dusun Gales, Kabupaten Magelang Guna Mewujudkan Kemandirian Ekonomi Keluarga. *Jurnal Ilmiah Pangabdhi*, *6*(2), 122–127. https://doi.org/10.21107/pangabdhi.v6i2.7922

Ramdani, S. D., Abizar, H., Fauzi, A., & ... (2022). Pelatihan Digital Marketing Bagi Pengrajin Gerabah Di Kampung Kosambi Desa Bumijaya. *BERNAS: Jurnal …*, *3*(4), 575–580. https://doi.org/10.31949/jb.v3i4.3398

Sangaji, N., Wiyono, V. H., & Mulyaningsih, T. (2019). Pengaruh Revolusi Industri 4.0 Pada Kewirausahaan Untuk KemNDIRIn Ekonomi. *Sambis*, 226–232. www.kompasiana.com

Saputro, H., Bugis, H., Siswanto, B., & Rohman, N. (2022). Pelatihan Pembuatan Modul Interaktif Berbasis e-Publication Sebagai Suplemen Bahan Ajar MOOC Rumah Vokasi. *SEMAR (Jurnal Ilmu Pengetahuan, Teknologi, Dan Seni Bagi Masyarakat)*, *11*(2), 154. https://doi.org/10.20961/semar.v11i2.56316

Setiawan, I., Ibrahim, Isnaini, Anugrah, M., Aslamiah, M., & Nurhayati. (2021). Peran Pasar Digital Di Era Pandemi Pada Wirausaha Muda Di Banyumulek. *Jurnal Pengabdian Magister Pendidikan IPA*, *4*(4), 440–447. https://doi.org/10.29303/jpmpi.v3i2.1161

Sumarno, & Gimin. (2019). Analisis Konseptual Teoretik Pendidikan Kewirausahaan Sebagai Solusi Dampak Era Industri 4.0 Di Indonesia. *JURNAL PENDIDIKAN EKONOMI: Jurnal Ilmiah Ilmu Pendidikan, Ilmu Ekonomi Dan Ilmu Sosial*, *13*(2), 1. https://doi.org/10.19184/jpe.v13i2.12557

Sumarno, M. (2010). Tingkat Adopsi Inovasi Teknologi Pengusaha Sentra Industri Kecil Kerajinan Gerabah Kasongan Kabupaten Bantul. *Jurnal Manajemen Dan Kewirausahaan*, *12*(1), pp.1-10. http://puslit2.petra.ac.id/ejournal/index.php/man/article/view/17984

Surya, E. P., Iriaji, I., Hariyanto, H., Lydia, B. A. V., Marcelliantika, A., & Aruna, A. (2021). INCUBATION OF COMMUNITY SANAN VILLAGE TO PRESERVE CULTURAL ARCHIVES BASED ON NFT. *ICADECS: International Conference on Art, Design, and Cultural Studies*, 3–7.

Volume 6 Nomor 9 (2024) 4312 – 4331 P-ISSN 2656-274x E-ISSN 2656-4691
DOI: 10.47476/reslaj.v6i9.3034

Susanti, H. D., Pradana, D. A., Fahrurrozi, M., & Mahfud. (2023). MSME Empowerment Through Business Coaching Programs and Massive Online Open Course. *GANDRUNG: Jurnal Pengabdian Kepada Masyarakat*, *4*(2), 1138–1148. https://doi.org/10.36526/gandrung.v4i2.2891

Tubastuvi, N., Mudjiyanti, R., Pramurindra, R., Budiningsih, S., & Aji, M. P. (2021). Jurnal of Economic and Social Empowerment. *Journal of Economic and Social Empowerment*, *I*(Ii), 69–74.

Vega, B. L. A., Aruna, A., Surya, E. P., Marcelliantika, A., & Iriaji. (2022). Incubation of Human Resources Blitar Regency Based on Nft Artwork. *International Conference on Art, Design, Education and Cultural Studies (ICADECS)*. http://conference.um.ac.id/index.php/icadecs/article/view/7926

Wininatin, K. (2021). PERAN KEWIRAUSAHAAN DALAM MEMAJUKAN PEREKONOMIAN INDONESIA. *Jurnal Disrupsi Bisnis*, *4*(3), 228–240. http://repository.stiesia.ac.id/id/eprint/4084

Yana, D. (2014). Potensi Kerajinan Keramik Dalam Seni Tradisi Pertunjukan Indonesia. *Panggung*, *24*(4). https://doi.org/10.26742/panggung.v24i4.131

Yogi, A., & Jamaaluddin, J. (2022). Pentingnya Pendidikan Kewirausahaan Dalam Mendukung Pertumbuhan Ekonomi Negara. *Entrepreneurship*. http://eprints.umsida.ac.id/10686/%0Ahttp://eprints.umsida.ac.id/10686/1/PS_7B1_013_Moch Yogi Aditiya.pdf

Zulfikri, A., & Rijal, S. (2023). Pendidikan Kewirausahaan dalam Sorotan Bibliometrik : Analisis. *Jurnal Pendidikan West Science*, *01*(09), 570–582.