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Analysis of teaching factory (TEFA) implementation in making Pait village profile video

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Abstract: This research aims to analyze collaboration through teaching factory (TEFA) in making village profile videos as a practice-based learning method involving students, college students, teachers, and the community. The research method used is a case study approach with data collection techniques in the form of in-depth interviews, participatory observation, and document analysis. The results showed that students successfully improved technical skills, such as camera operation and video editing, as well as soft skills, including teamwork, communication, and problem solving. For students, the project served as a professional development platform in mentoring, team management, and leadership. Teachers act as facilitators, while students become mentors who help students put theory into practice. This collaboration reflects the application of Gray's collaboration theory and Vygotsky's social constructivism through the process of scaffolding and social interaction. In addition, the resulting profile videos positively impacted the village community by promoting local potential and increasing community-based economic awareness. This research proves that TEFA is effective in linking theory and practice and directly contributes to skills development and local economic development.

Keywords: Broadcasting, collaboration, film, teaching factory, vocational education

Abstrak: Penelitian ini bertujuan untuk menganalisis kolaborasi melalui *teaching factory* (TEFA) dalam pembuatan video profil desa sebagai metode pembelajaran berbasis praktik yang melibatkan siswa, mahasiswa, guru, dan masyarakat. Metode penelitian yang digunakan adalah pendekatan studi kasus dengan teknik pengumpulan data berupa wawancara mendalam, observasi partisipatif, dan analisis dokumen. Hasil penelitian menunjukkan bahwa siswa berhasil meningkatkan keterampilan teknis, seperti pengoperasian kamera dan editing video, serta soft skills, termasuk kerja sama tim, komunikasi, dan pemecahan masalah. Bagi mahasiswa, proyek ini menjadi ajang pengembangan profesional dalam mentoring, manajemen tim, dan kepemimpinan. Guru berperan sebagai fasilitator, sementara mahasiswa menjadi mentor yang membantu siswa menerapkan teori dalam praktik. Kolaborasi ini mencerminkan penerapan teori kolaborasi Gray dan konstruktivisme sosial Vygotsky melalui proses scaffolding dan interaksi sosial. Selain itu, video profil yang dihasilkan berdampak positif bagi masyarakat desa dengan mempromosikan potensi lokal dan meningkatkan kesadaran ekonomi berbasis komunitas. Penelitian ini membuktikan bahwa TEFA efektif dalam menghubungkan teori dan praktik serta memberikan kontribusi langsung pada pengembangan keterampilan dan pembangunan ekonomi lokal.

Kata kunci: Penyiaran, kolaborasi, film, teaching factory, pendidikan vokasi

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INTRODUCTION

In the era of the Industrial Revolution 4.0, vocational education has a strategic role in preparing a workforce that has technical and non-technical skills in accordance with the demands of modern industry (Pramono et al., 2023; Spöttl and Windelband, 2021). Rapid advances in information technology, automation, and artificial intelligence have changed

the way industries operate and created a new need for a workforce with technology-based competencies (Hamdani et al., 2021; Matorevhu, 2023). In this context, vocational education institutions must adapt by adjusting their curriculum to align with the needs of the world of work. Teaching Factory (TEFA) is one of the innovative learning approaches that combines theory and practice in an atmosphere that resembles real industry (Kautsar et al., 2022). This model emphasizes real production-based learning, where students not only learn in the classroom but also gain hands-on experience that is more practical and relevant to the world of work. According to Setiyawami et al. (2020) TEFA allows students to engage in real projects that encourage the development of technical skills such as operation of equipment and technology, as well as soft skills such as communication and time management.

In its implementation, collaboration across educational levels is a key element that ensures the success of the Teaching Factory approach. According to Sukatiman et al. (2020), collaboration between vocational students and graduate students accelerates students' mastery of technical and interpersonal skills through hands-on mentorship in real projects. This is in line with the opinion of Maulana et al. (2020) which states that a collaborative approach in vocational education encourages a more effective knowledge transfer process from mentors to students. In the village profile video making project, students act as mentors who help students conceptualize the video, operate the recording device, and perform the editing process. This process not only improves students' technical skills in media production, but also trains them to face managerial challenges such as production scheduling and completing work on time (Oktafia & Kholisho, 2019).

Furthermore, the creation of village profile videos has strategic importance in supporting a community-based economy. This video serves as an effective digital promotional medium to introduce village potential, such as tourist destinations, superior products, and local culture. According to Dahana et al. (2023) video-based media has a high appeal because it conveys information visually and emotionally so that it is easier for the audience to understand. This opinion is reinforced by Ravi and Rajasekaran (2023), which states that village promotional videos can increase tourist interest by 40% if packaged with quality narratives and visuals. In a case study of making a video profile of Pait Village, Kasembon District, Malang Regency, collaboration between students of SMKN 3 Batu City and students of Malang State University resulted in a quality video that successfully increased the village's exposure (Saravanan & Rajan, 2024).

In addition to honing students' technical skills, the project also helps strengthen their soft skills. According to Poláková et al. (2023) one of the biggest challenges in TEFA implementation is ensuring a balance between technical skills and soft skills. This is clarified by Suranto et al. (2022) who emphasized the importance of collaboration, communication, and problem-solving skills in the modern world of work. Through this video-making project, students are trained to work in teams, manage time, and make quick decisions. Further, Barasa et al. (2024) revealed that skills such as team management and leadership acquired through the TEFA project will enhance students' work readiness in the digital era. Thus, this approach not only develops practical skills but also prepares students to become an adaptive and innovative workforce.

This research uses a case study approach as proposed by Yin (2017) which enables an in-depth understanding of collaboration in student skill development. This study

emphasizes the importance of stakeholder involvement, ranging from students, college students, teachers, to village communities in project-based learning (Arinaitwe et al., 2022). This multi-stakeholder collaboration creates positive synergies that have a sustainable impact on both students and village communities. In the Pait Village profile video project, students received direct guidance from university students as mentors, while the village community benefited from professional promotional media to support local economic potential. In addition to focusing on the end result of the video, this research also explores the learning process experienced by students, college students, and lecturers in collaborative interactions (Ma, 2022).

METHOD

This research uses a qualitative approach with a case study method, as proposed by Yin (2017). This approach was used to answer the questions of "how" and "why" the teaching factory (TEFA) collaboration can improve students' technical skills and contribute to society. Case studies were chosen because they are appropriate for exploring complex phenomena, such as the collaboration between SMKN 3 Batu City and Master of Vocational Education students from State University of Malang in a community service project through making a village profile video.

The research subjects consisted of 4 students of class XI of SMKN 3 Kota Batu, 7 students of Master of Vocational Education of State University of Malang, 2 teachers from SMKN 3 Kota Batu, and 2 community leaders of Pait Village, Kasembon District. Data collection techniques included in-depth interviews, participatory observation, and document analysis in the form of video recordings and activity reports. To support the data collection process, a Research Instrument Lattice Table was prepared as a guide in conducting interviews and observations:

Table 1. Research instrument lattice table

Research Subject	Aspects Measured	Indicator	Instrument Type	Question /Point	Reference
Students	Technical skills	Mastery of camera usage and editing software	Interview	1. How was your experience in operating the camera during the project? 2. What challenges did you face in the video editing process?	Maričić and Lavicza (2024)

Students	Soft skills	Teamwork, communication, problem solving	Interview	1. How did you collaborate with friends and students in the team? 2. How did you overcome technical problems during production ?	Trilling and Fadel (2012)
Student	Mentoring skills	Provide technical guidance and production direction	Interview	1. How do you provide guidance to students? 2. What challenges do you face in production direction?	Arnesson and Albinsson (2017)
Student	Professional skill development	Team management, decision making	Interview	1. What is your experience in managing a production team? 2. What was your role in decision-making during the project?	Daniel et al. (2017)
Teacher	Technical guidance	Mentoring during video production	Interview	1. How do you provide technical guidance to students?	Rothrock and Thiruvengada (2007)

				2. What is your role in the production process?	
Community Leaders	Benefits to society	Impact of village profile videos on local promotion	Interview	1. What is the impact of the village profile video on village tourism promotion? 2. Does the video help introduce the village's local products?	Sutresna et al. (2019)

Interviewe coding table

To protect confidentiality and facilitate data analysis, the research sources were coded as follows:

Table 2. Interviewee coding

No.	Source	Code
1	Vocational Students	S1
2	Vocational Students	S2
3	Vocational Students	S3
4	Vocational Students	S4
5	Master's Student	M1
6	Master's Student	M2
7	Master's Student	M3
8	Master's Student	M4
9	Master's Student	M5
10	Master's Student	M6
11	Master's Student	M7
12	Teacher 1	G1
13	Teacher 2	G2
14	Community Leader 1	T1
15	Community Leader 2	T2

Qualitative data analysis

Data collected through in-depth interviews, participatory observation, and document analysis were analyzed using Braun's thematic analysis approach. The qualitative data analysis process was carried out through the following stages:

1. Data reduction

   Raw data from interview transcripts, observation notes, and documentation were reduced by selecting relevant information related to the research focus, such as technical skills, soft skills, and the impact of TEFA collaboration.

2. Data Categorization

   The reduced data was coded based on emerging themes. The main themes include:

   a. Technical skills
   b. Soft skills
   c. Student mentoring skills
   d. Benefits of collaboration for village communities

3. Data Presentation

   Data were presented in the form of thematic tables and descriptive narratives supplemented with direct quotes from informants to strengthen the findings.

4. Conclusion Drawing and Verification Conclusions

   Were drawn based on patterns and relationships between themes, which were then verified through data triangulation (interviews, observations, and documentation) and member checking with resource persons.

Analysis of findings

The findings were analyzed by relating the data to two theories:

1. Social constructivism Theory by Vygotsky et al. (1978) which explains how collaborative interactions between students and college students facilitate the construction of new knowledge through the scaffolding process.
2. Collaboration theory by Gray (1991) which analyzes the stages of collaboration involving students, college students, teachers, and community leaders in the village profile video making project.

RESULTS AND DISCUSSION

Results of the village profile video production stage

The production process of this village profile video is divided into three main stages: pre-production, production, and post-production. The pre-production stage involved concept planning, script development, and determination of filming locations. This planning is crucial to ensure the effectiveness of video production activities (Haryanto, 2020). At this stage, the teacher acts as a facilitator who directs students to determine strategic locations and interesting storylines. In-depth discussions between students and students become an important foundation in building a video concept that is in accordance with the advantages of the village. S3 revealed:

> "We discussed together to develop a story that is interesting and captivates the attention of readers. In this process, the older students played an active role by providing a lot of valuable input, especially in determining the best location that

would be the setting for the story. With their experience and insight, they help direct the selection of locations that are not only relevant but also able to support the storyline to make it more lively and interesting." (Interview with Vocational Students 3, Sunday, September 29, 2024)

Collaboration between students and faculty creates a productive synergy in producing creative and innovative concepts. According to Afrianti et al. (2024), careful planning is key to the success of collaborative projects between vocational education and local communities. This shows that good coordination in the early stages plays a major role in the smoothness of the subsequent production process.

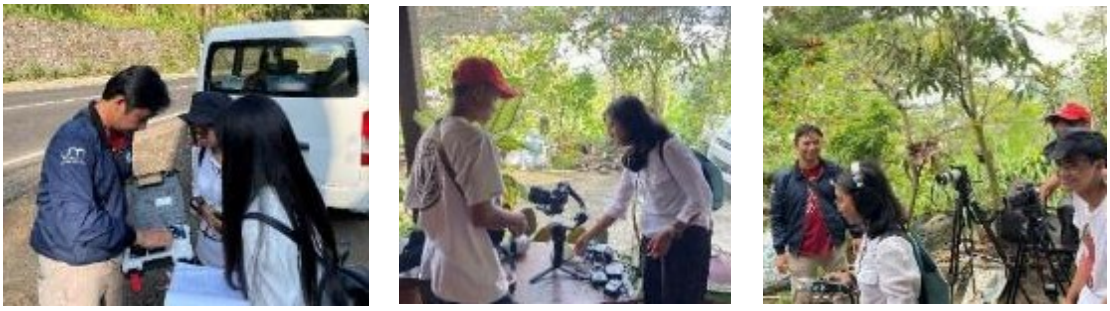

Fig. 1. Production stage

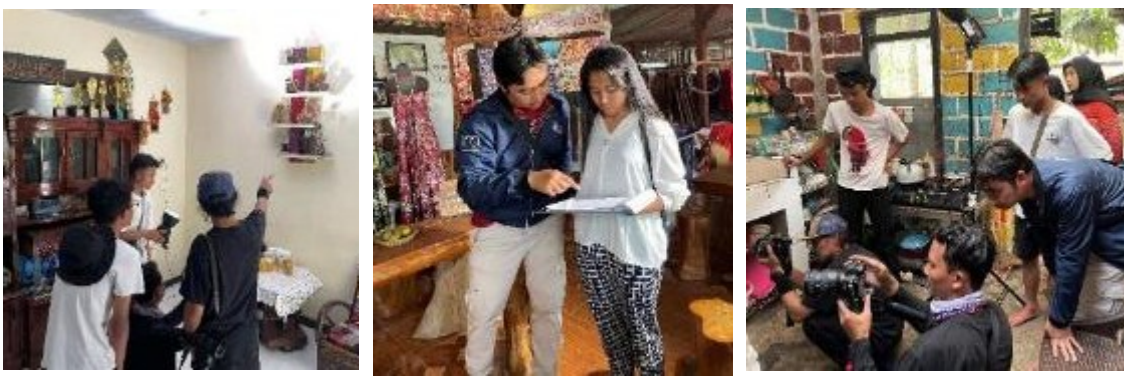

Fig. 2: Collaboration in decision making

The production stage is the implementation phase of the concept that has been designed. The main focus at this stage is the mastery of technical skills by students, such as camera operation, image composition settings, and lighting. This activity provides a practical learning space for students to practice the theories they learn in class. This is in line with the view of Wei et al. (2024) which states that students' direct involvement in production activities provides a valuable opportunity to hone their skills. In its implementation, students act as mentors who guide students through a gradual learning approach or scaffolding. S1 stated:

"Initially, I had difficulty in setting the camera focus because I was not familiar with the proper techniques and settings. However, with the determination to keep learning and some practice, I began to understand how the camera focus works and found the right rhythm. As time went by, my skills improved, and I now feel more confident and used to setting the focus to produce sharp, quality images." (Interview with Vocational Students 1, Sunday, September 29, 2024)

Student support allows students to gain an in-depth understanding of video production techniques. Pandey and Sharma (2022) emphasized that mentor guidance plays a crucial role in helping students build practical skills through repeated practice and problem-solving in the field. Thus, the production stage becomes a platform for students to enhance technical skills that are relevant to industry needs.

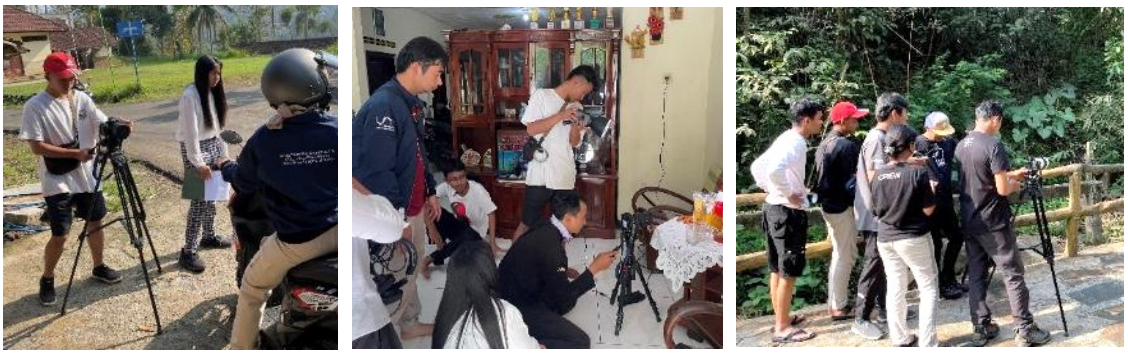

Fig. 3. Video capture stage

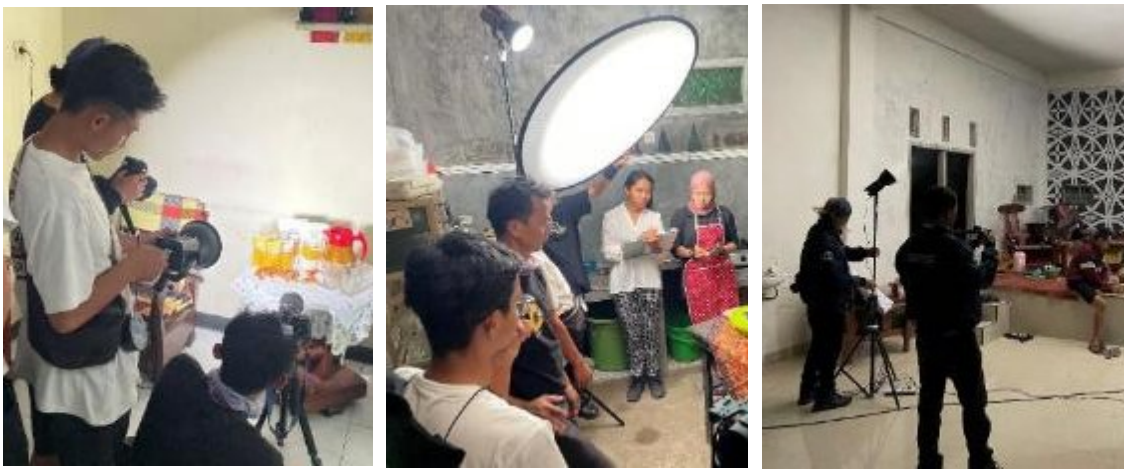

Fig. 4. Dynamic adaptation of students in the field

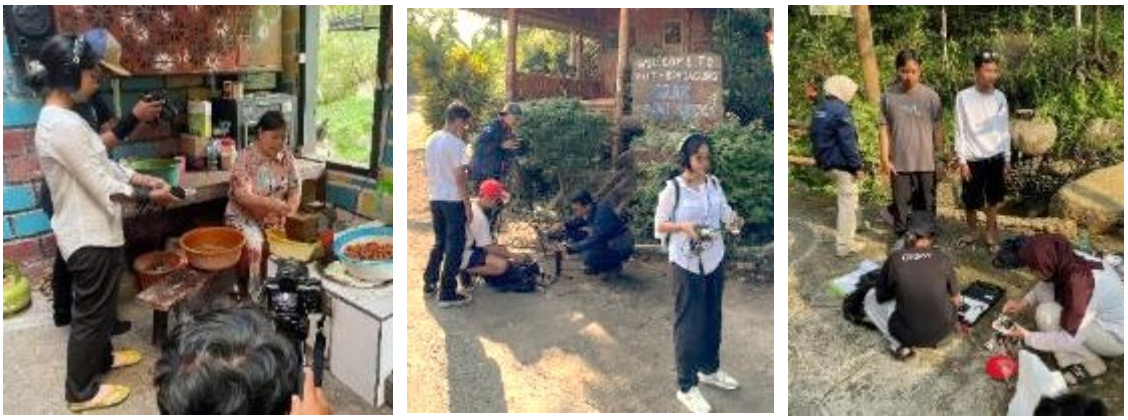

Fig. 5. Students' experience in using production equipment independently

The post-production phase is the final stage that is no less important in the production of village profile videos. In this phase, students work together to process the footage that

has been collected into a video that is ready for broadcast. This process involves selecting the best clips, adding audio, creating transitions, and setting the right tempo using professional software such as Adobe Premiere Pro. According to Attaran et al. (2019), the ability to master video editing software is a much-needed skill in today's digital era. M2 adds:

> "We explained the key steps in the video editing process, from how to choose the best clips that fit the storyline to making sure each piece of video looks harmonious. We also show how to add mood-supporting audio and organize the transitions between clips to make them look neat and professional. By understanding these techniques, the resulting video will look more interesting, structured, and able to convey the message well to the audience." (Interview with Master's Student 2, Monday, September 30, 2024)

Students' involvement in this process allows them to understand industry standards in video production. Thornhill-Miller et al. (2023) asserted that cooperation in the editing stage helps students improve professional skills relevant to the media industry. In addition, intensive guidance from students accelerates the improvement of students' editing skills, while instilling an understanding of the importance of details in the post-production process.

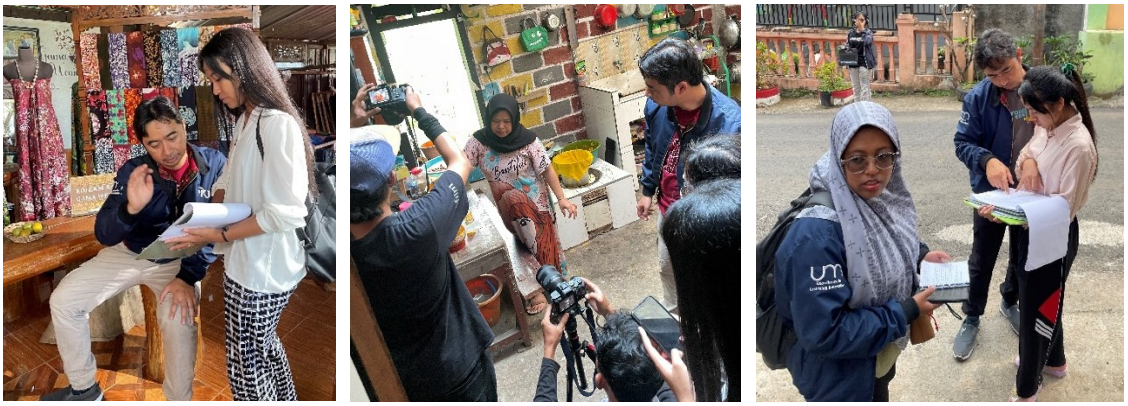

Fig. 6. Production process

The final result of this process is a village profile video that showcases various local advantages, such as tourist destinations, MSME products, and the cultural potential of the village. This video not only serves as a documentation medium, but also as an effective promotional tool to introduce the village to the wider community. The video is presented to villagers and uploaded to digital platforms as part of technology-based promotional efforts. According to Mavrikios et al. (2019) video-based media has the advantage of being a promotional tool that is able to reach a wider audience and have a significant impact. With this project, students not only gain practical learning experience, but also contribute to promoting the local potential of the village. This collaboration between vocational education and local communities in the production of village profile videos is an example of good practice that can be adopted in the development of education and technology-based promotional media.

Students' technical skills and soft skills

The improvement of students' technical skills in this project includes mastery of camera operation, image composition, and use of video editing software. According to Zervas and Stiakakis (2024) technical skills in video production are highly relevant to the demands of today's creative industries. These skills not only provide theoretical understanding, but also ensure students are ready to face practical challenges in the world of work. S2 delivered:

> "I gained a lot of valuable experience in managing lighting and determining shooting angles to create more professional results. By understanding the importance of light intensity, direction of light, and choosing the right angle, I learned how each of these elements can affect the overall visual appearance. This process taught me that a combination of optimal lighting and good shooting angles can result in works that are more aesthetically pleasing, sharp and eye-catching to the viewer." (Interview with Vocational Student's 2, Sunday, September 29, 2024)

This learning process is accelerated through intensive guidance from students who act as mentors. Arinaitwe (2021) explains that mentor guidance plays an important role in facilitating the practical learning process, where students not only learn from experience but also get more systematic direction.

In addition to technical skills, the project also helped students develop soft skills such as communication, teamwork, and problem solving. These soft skills are key elements in supporting successful collaboration between students and faculty. According to England et al. (2020), soft skills are an important component in the success of team-based projects, as they help individuals interact and solve challenges together. Students are trained to discuss, convey ideas clearly, and find solutions together when facing obstacles. S4 shared his experience:

> "When the camera encountered a problem, we immediately discussed together to find the right solution so that the work could continue. This situation was a valuable experience for me as it taught me the importance of teamwork. By communicating openly, supporting each other, and combining ideas, we managed to find a way to solve the problem. From this, I realized that good collaboration not only accelerates problem solving but also strengthens the sense of community and responsibility within the team." (Interview with Vocational Student's 4, Sunday, September 29, 2024)

This experience is in line with the findings of Diani et al. (2023) who emphasized that teamwork shapes the interpersonal skills needed in the modern industrial world. Students learn that the success of the project depends on their ability to cooperate and support each other.

Other soft skills developed through this project are time management and discipline. The strict deadlines for project completion encourage students to be responsible and more efficient in managing their schedules. This process taught them the importance of prioritizing tasks and completing work on target. S3 added:

> "We were faced with the challenge of completing the script, filming, and editing according to a predetermined schedule. Each stage requires careful planning and

> good coordination so that everything can run smoothly without time constraints. This situation encouraged me to be more disciplined in managing time, prioritizing, and completing tasks efficiently. This experience taught me that discipline is the key to achieving targets and maintaining optimal work quality under pressure." (Interview with Vocational Student's 3, Sunday, September 29, 2024)

Good time management is an important skill in the world of work, especially in the creative industries that often rely on deadline-based projects. Diaconescu et al. (2020) reinforce these findings by explaining that project-based learning helps students develop time management skills and responsibility. With real challenges and tight deadlines, students are trained to be more disciplined and responsible individuals, qualities that are highly needed in the professional world.

Master's student professional development

For the master's students, it was a professional development event that included mentoring, team management, and leadership skills. Involvement in this project not only provides practical experience but also trains students to adapt to the challenges of collaborative work. According to Bjørndal (2020) the experience of being a mentor gives students the opportunity to practice effective communication and knowledge transfer skills. In their role as mentors, students must explain technical concepts in a simple and understandable way. M2 states:

> "The experience of training students gave me the opportunity to hone my skills in conveying complex technical concepts in a simpler and easier-to-understand way. I learned how to adjust language, use practical examples, and provide step-by-step explanations so that the material is well received by the students. This process not only helped them understand the topic more clearly, but also improved my communication skills and understanding of the material. Thus, I became more skillful in bridging technical concepts to audiences with different levels of understanding." (Interview with Master's Student 2, Monday, September 30, 2024)

This experience is an important foundation for students to hone the communication skills needed in the workforce, especially in situations where technical understanding needs to be conveyed to diverse audiences.

In addition, students also learn how to manage the dynamics of work in a production team that involves many parties. This dynamic involves coordination between students, students, and teachers as facilitators, thus demanding good team management skills. M5 explained:

> "Managing filming time, organizing student roles, and coordinating with teachers are challenges that require precision and good management skills. Every element must be carefully prepared so that the process runs smoothly without any significant obstacles. Although not easy, this experience trained me to think more strategically in dealing with various situations. I learned how to prioritize, overcome obstacles quickly, and ensure all parties work in harmony to achieve optimal results. This has shaped my ability to make decisions in a more effective and structured manner." (Interview with Master's Student 5, Monday, September 30, 2024)

The management skills acquired through such project coordination are highly relevant to the demands of a professional world that requires strategic thinking and efficient task completion. According to Fittipaldi (2020), managerial and leadership skills in collaboration-based projects can prepare students for the more complex challenges of the world of work, including in environments involving multiple stakeholders.

Group dynamics and unexpected situations in the field also provide master's students with valuable experience in decision making and problem solving. Dynamic production conditions, such as technical constraints or time constraints, train students to think fast and be flexible in finding solutions. M3 added:

"In the middle of the filming process, we encountered technical problems that hampered the production. However, this situation encouraged us to immediately discuss and collaborate in finding the best solution so that the activities could continue. This experience taught me the importance of thinking fast, being flexible, and staying calm when facing problems. By working together and relying on the team's creativity, we managed to find an effective solution. From this incident, I learned that adaptive thinking and timely solutions are key to solving challenges in the field." (Interview with Student 3, Monday, September 30, 2024)

This is in line with research by Halttunen et al. (2023), which states that involvement in production-based projects gives students real experience in overcoming the challenges of the professional world. By facing various unexpected situations, students learn to be more responsive, creative, and able to think critically in solving problems that arise, an essential skill that is highly needed in the modern world of work.

Effective collaboration between vocational students, master's students, and teachers

The collaboration between vocational students, master's students, and teachers in this project demonstrates the application of the effective collaboration theory proposed by Gray (1991). The project was designed in three main stages: planning, implementation and problem solving, in which all parties were actively involved. This process ensured that each team member understood his or her role as well as their respective responsibilities. According to Gqwabaza and Maqoqa (2024), collaboration across educational levels helps to improve work efficiency in production teams as each individual brings different skills and perspectives. G1 stated:

> "We worked together to carefully plan the script, making sure every detail was clearly organized and structured. During this process, we also made sure everyone understood their respective roles and responsibilities, so everyone could contribute accordingly. Through good communication and effective coordination, we try to avoid misunderstandings or delays that could hamper the work. This process not only makes the activities run smoothly, but also strengthens the sense of togetherness and responsibility within the team to achieve maximum results." (Interview with Teacher 1, Thursday, October 3, 2024)

This planning creates a strong foundation for the project and minimizes the risk of miscommunication or role imbalance among team members.

At the implementation stage, the role of students as mentors is a key aspect in ensuring that students' technical skills develop according to production needs. Students provide guidance related to camera operation, image composition settings, and lighting, while teachers act as supervisors who ensure coordination continues to run smoothly. M4 explains:

> "We try to maintain good communication among team members so that all activities can go as planned and are well organized. In this process, the role of teachers was very helpful, especially in facilitating our coordination with the village community. The support and guidance from the teachers ensured that we could build harmonious relationships and get full support from the relevant parties. This made every stage run smoothly, from planning to implementation, while teaching us the importance of effective communication in achieving a common goal." (Interview with Master's Student 4, Monday, September 30, 2024)

Effective communication is the key to the success of this stage, in which Sultan (2024) emphasizes that establishing productive communication among team members can improve efficiency and create a harmonious working environment. In this context, collaboration involves not only the internal team but also the village community, which plays a role in the smooth running of production.

When faced with problems in the field, the team demonstrated the ability to resolve obstacles through open discussion and cooperation. Technical issues, such as equipment constraints or incompatible filming schedules, became challenges that were overcome together through a collaborative approach. S4 stated:

> "When facing technical obstacles, we learned to work together to find appropriate and effective solutions. This process encouraged us to discuss, listen to each other, and incorporate the best ideas from each team member. With the spirit of togetherness and good communication, we managed to overcome the obstacles that arose. This experience not only solves problems, but also strengthens team cohesiveness, builds trust, and fosters a sense of shared responsibility in achieving goals." (Interview with Vocational Student 4, Sunday, September 29, 2024)

This experience not only strengthens students' problem-solving skills but also builds team solidarity. According to Zhang et al. (2023) the ability to solve problems in teams creates a more effective and collaborative working environment. This proves that the challenges faced during the project become valuable opportunities to practice resilience, flexibility, and creativity in overcoming obstacles, skills that are highly needed in the professional world.

Benefits for the village community

The village profile video provides significant benefits for the Pait Village community, especially in the field of promoting local potential. By broadcasting the video through social media, the promotional reach becomes wider and can attract tourists and potential investors. Attractive visual content allows audiences to see first-hand the natural beauty, tourist destinations and superior products of the village, thus creating a sustainable positive impression. T1, one of the community leaders, stated:

> "This video has successfully introduced our village to a wider audience, providing an opportunity for many people to get to know its potential. Through the video, the beauty of tourist attractions and the diversity of local products in our village can be shown in an interesting and informative way. This not only increases the attractiveness of the village as a tourist destination, but also opens up opportunities for local products to reach a wider market. Thus, this video plays an important role in promoting our village and encouraging the economic growth of the local community." (Interview with Community Leader 1, Saturday, November 2, 2024)

These testimonials show the real impact of using visual media as a promotional tool. This finding is in line with research by Son et al. (2019) which shows that visual-based media has greater appeal for promoting local potential in the digital era. The dissemination of content through platforms such as YouTube, Instagram, and Facebook allows villages to reach a wider audience at a relatively affordable cost.

In addition to being a promotional tool, the village profile video also brings economic impacts that are starting to be felt by the people of Pait Village. One of the main benefits is the increase in the number of tourist visits who want to explore the uniqueness of the village's culture, handicrafts and culinary specialties. T2 added:

> "After this video was published, the impact began to be felt with the arrival of a number of visitors who were interested in seeing firsthand the typical handicrafts of our village. They want to witness the handicraft making process firsthand and try various traditional culinary delights that are the pride of the village. The presence of these visitors not only gives appreciation to local culture, but also opens up opportunities for craftsmen and culinary businesses to introduce their work more widely. This shows that video promotion can increase the interest of the outside community and help advance the village economy." (Interview with Community Leader 2, Saturday, November 2, 2024)

This statement shows that visual promotional media can have a positive domino effect, where increased visitor numbers directly support the local economy. According to Dahana et al. (2023), promotion through digital media is effective in increasing the attractiveness of community-based tourism, which has the potential to boost the income of village communities. With tourist visits, MSME products such as handicrafts and typical village food have a greater opportunity to be marketed and developed as a sustainable source of income.

More than that, village profile videos help to increase community awareness and pride in their local potential. Previously, this potential may have been overlooked or taken for granted by the local community. However, by showcasing the village's potential in an attractive video format, residents began to see the value of their village's uniqueness. G2 said:

> "This success has made the villagers even more eager to promote their potential, both in terms of tourism, culture, and local products. A sense of pride grows when they see the tangible results of cooperation, where joint efforts succeed in attracting the attention of more people. The realization that their contribution has a positive impact encourages the spirit to continue to maintain and develop the village to be

more widely known. This togetherness not only strengthens the bonds between residents, but also fosters a sense of belonging and responsibility for the sustainable development of the village." (Interview with Teacher 2, Thursday, October 3, 2024)

This statement reflects the social impact of the project, where togetherness and the spirit of mutual cooperation have been strengthened. This is in line with the findings of Nza-Ayang (2024) which states that community-based projects increase community togetherness and active involvement in local development. With growing collective pride, communities have stronger motivation to maintain and develop their local potential.

Overall, the benefits of the village profile video include promotional, economic and social aspects that support each other. This project proves that collaboration between schools, universities and communities can produce work that has real and sustainable impact. With strategic and sustainable publications, Pait Village has a greater chance of being widely recognized, both regionally and nationally. This not only improves community welfare through better economic income, but also encourages village development based on local potential. Cross-sector collaboration like this is a good example of empowering communities through the use of digital technology, which ultimately creates a positive impact for all parties involved.

Implementation of Yin's theory of case studies

This research implements case study theory Yin (2017) to dig deeper into the phenomenon of collaboration between students, college students and teachers in the production of village profile videos. Case studies were chosen because they allow for an in-depth understanding of the process and impact of collaboration in a vocational learning context. The focus of this research involves three main aspects: improvement of students' technical skills, development of soft skills, as well as tangible contributions to the community. According to Yin (2017) case studies emphasize a systematic approach to data collection, analysis, and conclusion drawing, so that the research results can provide a comprehensive picture of the phenomenon under study. This process includes data collection through triangulation methods, involving interviews, participatory observation, and document analysis, to ensure data validity and reliability.

The research data was collected in-depth through various complementary methods. In-depth interviews were conducted with students, college students and teachers to understand the experience and development of technical skills during the project. Participatory observations were conducted directly in the field to see how this collaboration took place in real practice. The data was then analyzed and verified using data triangulation, which is an important approach in case studies. Bans-Akutey and Tiimub (2021); and Farquhar et al. (2020) emphasized that data triangulation in case studies increases the validity of research findings as it allows comparison of multiple data sources. S2 states:

"Thanks to the patient and directed guidance from the older students, I managed to improve my skills in using a camera and editing videos. Initially, I felt hesitant and lacked confidence, but with the guidance given, I began to understand the basic techniques of shooting and effective video editing steps. This process not only made me more technically proficient, but also gave me the confidence to explore creative ideas in video making. This experience is an important step for me to grow and be

more courageous in trying new things in the multimedia field." (Interview with Vocational Students 2, Sunday, September 29, 2024)

This statement is reinforced by the results of observations that show an increase in students' ability to operate technical video production equipment.

The data reduction stage is an important step in analyzing the information that has been collected. Data reduction is done by sorting, filtering, and selecting information that is most relevant to the research focus, such as the development of students' technical skills and the positive impact of collaboration on village communities. Nicmanis (2024) explains that data reduction helps researchers focus analysis on significant main findings and minimize less relevant information. The results of the analysis were organized in the form of thematic narratives supplemented with direct quotes from informants to provide a clearer picture. With this approach, the data obtained is not only descriptive but also provides deep insight into the impact of the collaboration. The systematic presentation of data allows for strong conclusions to be drawn that are relevant to the theory used.

The implementation of Yin's case study theory in this research provides a strong foundation in evaluating the collaborative practices implemented through the Teaching Factory method. This process shows how education can respond to community needs through a practical and applicable approach. The village profile video production project is a clear example of how collaboration across educational levels can produce work that has a direct impact on the community, while at the same time improving the competence of students and college students. In addition, this research proves that the case study approach is effective in uncovering good practices in vocational learning. Collaboration between students and teachers not only serves as a technical learning process but also builds communication, leadership and problem-solving skills relevant to the world of work. Thus, this study not only contributes to theory development but also provides tangible benefits to vocational education and local communities.

Implementation of Vygotsky's theory of social constructivism

Social constructivism theory Vygotsky et al. (1978) focuses on the learning process that occurs through social interaction, particularly through the concepts of scaffolding and zone of proximal development (ZPD). In the context of project-based learning such as village profile video production, this theory is highly relevant. Students act as mentors who provide gradual guidance to students according to their level of development. This process allows students to gradually master new, more complex skills. According to Chairinkam & Yawiloeng (2024) scaffolding allows students to learn with support from more experienced parties until they are able to complete tasks independently. With this approach, learning becomes more effective as students are encouraged to go beyond their initial abilities with structured assistance.

One important aspect in the implementation of scaffolding is the mastery of technical skills by students, such as camera operation and video editing. Master's students provide direct guidance to vocational students through real practice. M2 stated:

"We accompany students directly as they practice, ensuring each step is well understood through the examples we provide. With this approach, students can learn gradually, observing and understanding the techniques more clearly. As time

goes by, their confidence grows, and they begin to dare to try on their own without much help. This process not only improves their practical skills, but also teaches independence and the ability to complete tasks more effectively." (Interview with Master's Student 2, Monday, September 30, 2024)

This guidance allows vocational students to observe, imitate, and eventually practice technical skills independently. Kasapoglu et al. (2023) asserted that the interaction between mentors and students accelerates the practice-oriented learning process. In this case, the student acts as a facilitator who not only provides instruction but also adjusts the level of support according to the student's needs. Through this gradual approach, students gain confidence and competence in mastering video production technology.

In addition to technical skills, the ZPD concept is also evident in the development of soft skills of the students who participated in this project. Through teamwork, students learn to communicate effectively, solve problems, and adapt to challenges that arise during production. S4 stated:

> "Whenever we face obstacles, we always discuss with our older students to find the best solution. They provide feedback and direction that helps us understand the problem more clearly and find ways to overcome it. This process not only helped us resolve obstacles, but also built our confidence in working together as a team. With their guidance, we learned the importance of communication, supporting each other, and collaborating to achieve a common goal more effectively." (Interview with Vocational Students 4, Sunday, September 29, 2024)

This statement illustrates how social interaction within the ZPD helps students go beyond their limitations. Singgih et al. (2024) explained that when students work alongside more experienced individuals, they get a boost to develop the interpersonal skills needed in the world of work. With support from mentors, students learn to solve problems collaboratively, hone communication skills, and organize effective teamwork dynamics.

The implementation of Vygotsky's theory in this project proves that collaboration-based learning encourages students to build technical and interpersonal skills through hands-on experience. The social interactions that occur in a real work setting not only help students understand concepts, but also develop skills relevant to the industrial world. With gradual support provided through scaffolding and encouragement to work within the ZPD, students have the opportunity to experience deeper and more meaningful learning. Moreover, this experience prepares students to face challenges in a professional work environment, where technical skills and soft skills are two very important elements. The collaboration in this project is a clear example of how Social Constructivism theory can be practically implemented to create effective and sustainable learning.

Gray's implementation of collaboration theory

Collaboration theory Gray (1991) was applied in this project through three main stages: joint planning, collaborative implementation, and joint problem solving. In the planning stage, all parties of students, teachers, and villagers - worked together to conceptualize the video and divide roles based on their respective abilities. This process

ensured that all parties had the same understanding of the project's objectives and workflow. G1 stated:

> "We sat down together to carefully design the concept and flow of this video, ensuring every detail was well thought out. Through open discussions, each party understood their respective roles and responsibilities, so there was no confusion in the execution. This process created good coordination, where everyone could work in sync and focus on the assigned tasks. With a clear division of labor, working on the video becomes more effective and the results are more structured and in accordance with the plan that has been agreed upon." (Interview with Teacher 1, Thursday, October 3, 2024)

This statement emphasizes the importance of involving all team members in the planning process. According to Nonet et al. (2022), multi-stakeholder collaboration increases the active involvement of all team members to achieve a common goal. With comprehensive planning, each individual knows their respective roles and responsibilities so that the project can run more structured.

The implementation stage involves a strong synergy between students, students and teachers. Students act as mentors who guide students in video production, such as camera operation and editing techniques, while teachers act as supervisors to ensure the whole process goes according to plan. M4 explained:

> "In the production process, we collaborate with students to combine their creative ideas and technical skills for optimal results. The teacher's role is crucial in ensuring coordination runs smoothly, from the division of tasks to the completion of each stage of the production. With the right guidance and direction, all parties can work in harmony, support each other, and understand their respective responsibilities. This collaboration not only improves students' skills, but also creates a more organized and productive working atmosphere, so that the project can be completed well as expected." (Interview with Master's Student 4, Monday, September 30, 2024)

This statement emphasizes that collaboration requires open communication and clear roles between all parties. Research Chirwa and Boikanyo (2022) supports that effective implementation of collaboration relies on good coordination and transparent communication. With synergies established, the production process runs more efficiently and provides a significant learning experience for students, while improving their technical skills.

When faced with challenges in the field, the entire team demonstrated the ability to work together in solving problems collectively. Technical obstacles, such as equipment breakdowns or differences of opinion in shooting, were overcome through open discussions and joint solutions. S3 shares:

> "During the filming process, we faced several technical obstacles that hampered the production. However, these challenges became moments to help each other and collaborate in finding the best solutions. By discussing, sharing ideas, and working together, we managed to overcome the problems one by one. This situation not only strengthened the team's cohesiveness, but also trained us to stay calm, think

creatively, and make quick decisions in the midst of unexpected conditions." (Interview with Vocational Student 3, Sunday, September 29, 2024)

This situation shows the application of Gray's theory in practice, where cooperation and openness are the main keys in overcoming problems. Diani et al. (2023) emphasized that collaborative problem solving strengthens team skills and increases project productivity. With this approach, every challenge becomes an opportunity for the team to learn, adapt and find effective solutions. This cross-level collaboration proves that with careful planning, open communication, and participatory problem solving, projects can run effectively and have a significant impact on all parties involved.

CONCLUSION

This research shows that collaboration through teaching factory (TEFA) in making village profile videos has a positive impact on students, college students, teachers, and village communities. The project successfully improved students' technical skills, such as camera operation, image composition settings, lighting, and use of video editing software. In addition, students also developed soft skills, including communication, teamwork, time management, and problem-solving that are important for the working world. For students, involvement in the project serves as a professional development platform through technical mentorship, team management and leadership, which strengthens their ability to transfer knowledge and solve problems collaboratively. Teachers acted as facilitators to ensure smooth collaboration, while students as mentors helped students put theory into practice. This collaboration reflects the application of Gray's collaboration theory, which emphasizes the importance of joint planning, implementation, and problem solving. The project also provided significant benefits to the Pait Village community through a profile video that promoted local potential, such as natural tourism, culture, and MSME products, thus helping to increase the number of tourists and interest in village products. In addition, the video builds residents' pride in their local potential. The application of Yin's case study theory helped to delve deeply into the effectiveness of this collaboration through a systematic approach, while Vygotsky's theory of social constructivism was seen through the *scaffolding* process and zone of proximal development (ZPD), where students develop with the guidance of mentors. Overall, the TEFA approach proved effective in linking theory and practice, preparing students for the demands of the industrialized world, while providing positive economic and social impacts for the village community. Sustainable partnerships between schools, universities and communities need to be enhanced to support similar programs oriented towards skills development and sustainable local development.

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