

Enhancing Teacher Competence in Developing Local Wisdom-Based Teaching Materials through HyFlex Participatory Workshops in English Teacher Community in Jayapura Regency

Nurul Farida ^{1*}, Yari Dwikurnaningsih ¹, Mawardi ¹

¹Universitas Kristen Satya Wacana, Indonesia

Corresponding Author: ✉942024006@student.uksw.edu*

ABSTRACT

The integration of local wisdom in English learning in Jayapura Regency is not optimal due to the gap between teachers' theoretical knowledge and practical skills in developing teaching materials. Factors that influence this are geographical constraints, the lack of written cultural references, and time constraints due to administrative burdens. This study aims to improve teachers' competence in developing teaching materials based on local wisdom through the Hyflex Participatory Workshop. Using the Stringer (Look, Think, Act) School Action Research method in two cycles, the study involved 35 MGMP English teachers in Jayapura Regency as subjects. This study design used a mixed method approach. Data were collected through tests, observations, and documentation, then analyzed using inferential and descriptive statistics. The results showed that active participation of participants increased from 75% in Cycle I to 95% in Cycle II after optimizing hyflex learning (hybrid synchronous, online synchronous, and online asynchronous) with the help of valid and practical LMS and Flipbook guides. Teacher competence increased with an average score rising from 90.7 (pre-test) to 98.4 (post-test) and classical completeness reaching 100%. There was a significant difference in the pre-test and post-test averages based on the Wilcoxon Signed Ranks Test with a Sig. 0.001 ($p < 0.05$). The action was proven effective in improving teacher competence as evidenced by an N-Gain score of 0.88 ($g > 0.7$). This study resulted in an integrated digital teaching material bank. It was concluded that Hyflex flexibility and participatory collaboration effectively overcome technical and epistemological barriers for teachers in the English MGMP in Jayapura Regency.

Keywords: *Teacher Competence, Local Wisdom Teaching Materials, Hyflex Workshop, English Teacher Community*

ARTICLE INFO

Article history:

Received
January 03, 2026
Revised
March 11, 2026
Accepted
March 30, 2026

Journal Homepage <https://attractivejournal.com/index.php/aj/>

This is an open access article under the CC BY SA license

<https://creativecommons.org/licenses/by-sa/4.0/>

Published by CV. Creative Tugu Pena

INTRODUCTION

Education plays a fundamental role in creating high-quality human resources. The quality of education itself is the key for a country to successfully face various global challenges. According to UNESCO (2024) in the *Education 2030: Incheon Declaration and Framework for Action*, high-quality education is the foundation for individual and societal development; it must be responsive to 21st-century needs, including technological developments, global challenges, and learner diversity. Education is not merely about imparting knowledge but also about forming the character, attitudes, and skills necessary to adapt to the times. This aligns with Tilaar (2002), who asserts that education holds a strategic role in shaping the quality of human resources, equipping humans not only with knowledge and skills but also with the values and character required to adapt to changing eras.

To remain relevant amidst the complexity of an evolving world, education must keep pace with advances in science and technology. Consequently, flexible curricula, creative learning approaches, and teaching materials relevant to daily life contexts are essential to

support this change. In the Indonesian context, specifically in Jayapura Regency, the education system faces distinct challenges. This region is rich in diverse cultures and local values that could serve as valuable learning resources. Local wisdom is a very valuable asset and can be used to make learning more relevant. Cultural values that have developed over generations have great potential in shaping the character and morals of students. As stated by Mahrinasari et al. (2024), local wisdom is a product of past culture that should continuously be used as a guide for life.

However, a significant gap exists between this potential and the reality in the field. The education system in Jayapura still largely relies on general teaching materials that do not always consider the local context. Consequently, many students feel less connected to the lessons taught, which in turn affects their motivation to learn. (Tomlinson, 2003) emphasizes that integrating contextually relevant teaching materials into the curriculum plays an important role in increasing student engagement and motivation. Therefore, integrating local wisdom into teaching materials is crucial so that the learning process becomes more relevant, meaningful, and easily accepted by students. Developing local wisdom-based teaching materials is not only important for academic aspects but is also crucial in improving the quality of teaching. Research (Jonassen & Slavin, 2025) shows that local wisdom-based teaching materials not only enrich students' knowledge but also strengthen their moral and ethical character. Conversely, Fitrianto & Farisi (2025) and Sadri & Temaja (2025) highlights that many teachers in schools underutilize local wisdom as a learning source, even though it has great potential to support the development of learning tools relevant to the local context.

The teacher holds the primary role in shaping meaningful learning experiences. However, the reality reveals that most teachers do not yet possess adequate skills to adapt the existing curriculum with local values relevant to their regional context. Based on interviews and observations of 45 teachers actively participating in the English Subject Teachers' Meeting (MGMP) in Jayapura Regency, only 12 teachers had ever independently compiled local wisdom-based teaching materials. This finding indicates that many teachers still require more comprehensive training and equipping in compiling teaching materials that suit local culture and conditions. Several challenges in developing local wisdom-based teaching materials include a lack of teacher competence, insufficient training in adapting the curriculum, and a lack of support in the form of regulations. Additionally, limited resources in providing local wisdom-based teaching materials act as a barrier. Teachers often face difficulties in accessing relevant references to develop local culture-based teaching materials.

The competence of teachers is the main key to ensuring good and sustainable education quality. Aliyyah (2020) states that teachers play an important role in educational success. Competence implies the ability or proficiency to do something, encompassing three main aspects: knowledge, skills, and basic principles reflected in how one thinks and acts. A competent teacher not only masters teaching materials but also has the ability to manage the class well and adjust teaching methods to existing conditions. According to the Law regarding Teachers and Lecturers of Indonesia, pedagogic competence includes the teacher's ability to manage learning effectively. Furthermore, (Izzah et al., 2024) defines pedagogic competence as the ability to manage the learning process of students. Professional competence is equally vital. Ashari et al. (2025) explains that professional competence constitutes the various skills required to be a professional teacher. This includes the ability to compile relevant and contextual teaching materials (Kunandar, 2010).

However, competence does not grow in a vacuum. Education and training are fundamental elements in forming teacher competence. Suyanto, (2006) states that formal education provides teachers with the knowledge and professional values needed for effective teaching. Beyond formal education, Mulyasa (2009) emphasizes that effective teacher training must be tailored to the actual needs of teachers, particularly in addressing curriculum changes. Sagala (2010) notes that participatory and reflective training is very effective in improving teachers' professional competence because it actively involves teachers in solving real classroom problems. Furthermore, experience plays a role; Uno & Mohamad (2012) assert that teaching experience allows teachers to refine pedagogical skills. Sudjana (2007) and Hamalik (2007)

confirm that experienced teachers develop sharper professional intuition and become reflective practitioners. Support systems are also critical. Lestari & Wena (2010) highlight the importance of constructive supervision, while Senge (2000) and Robbins & Alvy (2003) emphasize the role of professional learning communities and mentoring in teacher development. A supportive work environment and school culture, as described by Gibson et al. (2003), Hoy & Miskel, (2008), Purwanto (2009) and Schein (2004), encourage teachers to innovate.

To address the lack of competence in Jayapura, a systematic and sustainable effort is needed. This can be achieved by conducting training for English teachers on compiling local wisdom-based teaching materials within the MGMP community. The MGMP (Subject Teachers' Consultation) is a professional forum for teachers aimed at improving learning quality by providing a space for discussion and sharing experiences. One effective solution proposed in this study is organizing a Participatory Hyflex (Hybrid-Flexible) Workshop.

The Participatory Hyflex Workshop combines face-to-face and online sessions, providing flexibility for teachers to participate without being hindered by time and location constraints. This approach is chosen based on several theoretical underpinnings. Regarding the participatory aspect, Knowles (1970) theory that adults learn more effectively when they are directly involved in learning. With a participatory approach, teachers can better understand new concepts and apply them in their teaching practice, increasing their self-confidence. Regarding the Hyflex format, Beatty (2007) explain that hybrid training facilitates flexibility without sacrificing interactivity. Raes et al. (2020) highlights that hybrid learning offers rich interaction opportunities in both synchronous and asynchronous modes. Mulenga & Shilongo (2025) and Mushtaq & Iqbal (2024) describe how hybrid models encourage comprehensive learning experiences by combining social contexts with digital technology. Furthermore, Ajagbe et al. (2023) argue that hybrid systems offer advantages in documentation and assessment. From a social perspective emphasize that the success of hybrid learning depends on fostering an inclusive learning community (Boelens et al., 2017).

This specific approach is highly relevant to the geographical conditions of Jayapura Regency, where distances between areas are significant and terrain is difficult. The Hyflex model allows broad collaboration and real-time collection of teacher work. Previous research supports the importance of such interventions. Indriyani (2018) showed that teaching materials containing local cultural elements deepen students' understanding and foster a love for their own culture. Rohayati & Subekti (2020) stated that participatory and contextual training has a significant impact on improving teacher skills in compiling teaching materials. Sari & Handayani (2021) showed that collaborative activities and immediate practice produce valid results in encouraging teachers' abilities.

However, while Wonda (2022) notes that teachers in Papua are motivated to integrate local values, they are hindered by pedagogical limitations and lack of training. Yuliani & Prasetyo (2021) and Mofu (2021) emphasize the importance of developing contextual modules and revitalizing cultural values through training. The novelty of this research lies in the specific application of the Participatory Hyflex model to address these issues. While Supriyadi & Sari (2022) and theories of Andragogy (Knowles, 1980) support adult learning through training, and the regulation (Permendiknas No 2) allows teachers to use various learning resources, there is a lack of implementation of flexible, technology-integrated workshops specifically designed for English teachers in remote, culturally rich areas like Jayapura.

Based on the identification of problems specifically the limited integration of local wisdom, lack of teacher competence, difficulty accessing references, and the non-optimal role of MGMP in providing adaptive training this research is urgent. The Participatory Hyflex approach is predicted to facilitate participants in designing teaching materials that are more contextual and based on local wisdom. This study aims to describe the initial condition of teacher competence in MGMP English Jayapura Regency, describe the implementation of the Hyflex participatory workshop, and analyze the improvement of teacher competence in compiling local wisdom-based teaching materials. By solidifying collaboration between teachers and stakeholders, this effort is expected to create higher quality education and form a generation that is not only intelligent but also possesses strong character based on local values

(Tilaar, 2002). Therefore, this research focuses on "Improving Teacher Competence in Compiling Local Wisdom-Based Teaching Materials through Participatory Hyflex Workshops at MGMP English Jayapura Regency."

METHOD

This study utilized a School Action Research (SAR) design based on Stringer's model, which operates through a spiral cycle of *Look* (observation), *Think* (planning), and *Act* (implementation). The research employed a mixed-method approach to comprehensively capture both process dynamics and measurable outcomes. It was conducted at the English Subject Teachers' Meeting (MGMP) center in Jayapura Regency over three months, involving 35 English teachers selected through purposive sampling as the research subjects. The intervention implemented was a Participatory Hyflex Workshop, designed to enhance teacher competence in developing local wisdom-based teaching materials through flexible modes (onsite, synchronous, and asynchronous)

Data collection techniques were extensive, comprising pre-tests and post-tests to measure cognitive gains, semi-structured interviews to explore challenges, observations to monitor participation, and questionnaires to assess satisfaction. The instruments used included observation checklists, interview guides, validation sheets, and test items, all validated by experts. Quantitative data were analyzed using descriptive statistics, *Paired Sample T-Test*, and *N-Gain Score* to determine the significance of improvement, while qualitative data followed the reduction, display, and verification stages. The success indicators were set at >80% active participation, >90% positive feedback, and a statistically significant increase in competence scores.

RESULTS AND DISCUSSION

This study was conducted using the School Action Research (SAR) method based on Stringer's model, which comprises the phases of *Look* (Observation), *Think* (Analysis/Planning), and *Act* (Implementation). The research aimed to improve the competence of English teachers in Jayapura Regency in developing local wisdom-based teaching materials through a Participatory Hyflex Workshop. The study was carried out at the English Subject Teachers' Meeting (MGMP) center in Jayapura Regency. The following sections detail the findings from each stage of the research cycle.

Phase 1: Look (Initial Observation and Condition)

The *Look* phase served as the initial step to gather information regarding the baseline condition of the research subjects. This phase involved identifying problems and performing a needs assessment to answer the first research question regarding the initial competence of teachers. Data collection utilized two primary instruments: a pre-test to measure cognitive understanding and interviews to explore practical experiences and challenges faced by teachers in the field.

Data obtained from 35 English teachers who are members of the MGMP revealed the initial competence map regarding teaching material development. The pre-test was designed to assess the teachers' theoretical understanding of teaching material concepts and local wisdom integration before any intervention. The distribution of the pre-test scores is presented in Table 1.

Tabel 1.
Distribution of Pre-Test Scores on Teacher Competence

No.	Score Range	Category	Frequency	Percentage
1	86-100	Very Good	27	77,1%
2	71-85	Good	3	8,6%
3	56-70	Sufficient	1	2,9%
4	<56	Poor	4	11,4%
Total			35	100%

Source: Processed Data, 2026

Based on the raw pre-test data, the mean score was 90.7. Statistically, the majority of teachers (77.1%) already possessed "Very Good" cognitive understanding of teaching material theory. This is evidenced by numerous respondents achieving perfect scores (100) or scores above 90, such as respondents coded BUR, DOM, and DIR. However, the data also exposed a significant competence gap. Four teachers (11.4%) fell into the "Poor" category with scores below 56, specifically respondents with codes ROS (45), USR (50), NIT (50), and FEN (55).

The variation in scores ranging from a low of 45 to a high of 100 indicates that while general theoretical knowledge is high, there is a disparity within the MGMP members that requires intensive intervention to equalize basic competence. This gap underscores the necessity for training that is not merely theoretical but practical and collaborative to ensure all teachers can apply the knowledge in developing materials.

To contextualize the quantitative data, in-depth interviews were conducted. Key findings from respondents, including a senior teacher (Code: BER) with 10 years of experience, revealed several critical themes:

- 1) Teachers generally have experience modifying existing textbooks to be more contextual. For example, some have created materials for *descriptive text* regarding traditional houses or local dances. This correlates with the high pre-test scores, suggesting that conceptually, teachers understand what contextual materials are.
- 2) Despite having the will, teachers face technical hurdles. A respondent noted: *"The most frequent obstacles are time and references. Compiling local wisdom-based materials requires observation that cannot be done quickly. Moreover, the limitation of written references in English is a major obstacle, added to the administrative burden that takes up time"*.
- 3) Teachers expressed a strong need for practical training, specifically in utilizing technology and Artificial Intelligence (AI) to aid development. *"The training needed is practical, such as how to integrate local wisdom and the use of technology and AI"*.
- 4) Teachers hope the MGMP can function as a collaboration hub and a "bank" of teaching materials so they do not have to work in isolation.

The initial condition is characterized by high but uneven cognitive readiness. While the average theoretical understanding is high (90.7), practical implementation is hindered by external factors like lack of specific English references for local culture and time constraints. These findings confirm the urgency of the Hyflex (Hybrid-Flexible) and Participatory approach to address time limitations and facilitate resource sharing.

Phase 2: Think (Planning and Validation)

Based on the *Look* phase analysis, the researcher designed an intervention using the Participatory Hyflex Workshop model. The primary product developed was a training guide housed in a Google Site LMS and flipbook format. Before implementation, this guide underwent rigorous validation by material and media experts to ensure feasibility.

Validation was conducted by Four experts: Dr. Bambang Ismanto, M.Si., Dr. Sophia Tri Satyawati, M.Pd., Stefanus Relmasira, Ph.D., and Sutrimo, S.Pd. The assessment covered the suitability of materials, local wisdom content, and the Hyflex strategy.

Tabel 2.
Material Expert Validation Results

No.	Assessment Aspect	Mean Score	Category
1	Material suitability with participant characteristics	3.44	Very Valid
2	Hyflex participatory training	3.22	Valid
3	Feasibility of local wisdom material	3.56	Very Valid
4	Structure and language	3.22	Valid
Total		3.36	Very Valid

Source: Processed Data, 2026

The guide was declared "Very Valid" with a total mean of 3.36. The highest score was in the feasibility of local wisdom material (3.56), indicating strong integration of cultural concepts. Revisions were made based on expert feedback, such as explicitly defining the Hyflex modes (Onsite, Online Synchronous, Online Asynchronous) to prevent participant confusion.

Validation of the LMS and digital media focused on usability, visual design, and pedagogical function within a Hyflex context.

Tabel 3.
Media Expert Validation Results

No.	Assessment Aspect	Mean Score	Category
1	LMS Function	3.44	Very Valid
2	Visual Display & Design	3.22	Valid
3	User Experience and Accessibility	3.56	Very Valid
4	Pedagogical Media in Hyflex Context	3.22	Valid
Total		3.36	Very Valid

Source: Processed Data, 2026

The media validation yielded a "Very Valid" category (3.58). The LMS function and pedagogical support received the highest scores (3.67), suggesting the Google Sites platform effectively facilitated participatory interaction. Validators noted that while the visual design was good (3.44), there was room for aesthetic improvement.

A limited trial with 8 teachers resulted in a "Very Practical" rating (92.19%). "Material Integration" scored highest (96.09%), showing that the logical flow of the LMS made it easy for teachers to understand the material development process.

Phase 3: Act (Implementation of the Action)

The implementation was carried out in two cycles using the *Participatory Hyflex Workshop* model.

Cycle 1 Implementation (December 16, 2025 for 1 Week ago). The focus was on introducing concepts, simulating LMS use, and drafting initial materials. Synchronous sessions via Google Meet were followed by asynchronous independent work on the LMS. Participant activity was recorded at 75%, falling short of the 80% success indicator. Internet instability caused participants to disconnect frequently from Zoom/Meet. Interaction was limited to teacher-facilitator, lacking peer collaboration. Some participants struggled with Join Google Meet. The researcher decided to proceed to Cycle 2 with improved strategies, specifically intensive technical assistance and optimizing collaborative features.

Cycle 2 Implementation (January 13-20, 2026) The focus shifted to peer review, material refinement, and product finalization. Synchronous sessions focused on case studies and sample presentations. Asynchronous sessions involved peer comments on the LMS. The result of activity increased significantly to 95%. The observer noted, "Discussion is very live, participants give constructive feedback." The collaborative atmosphere was established, and technical readiness improved (participants moved to locations with better signals). The success indicator (>80%) was met, and the cycle was concluded.

Evaluation of Competence Improvement

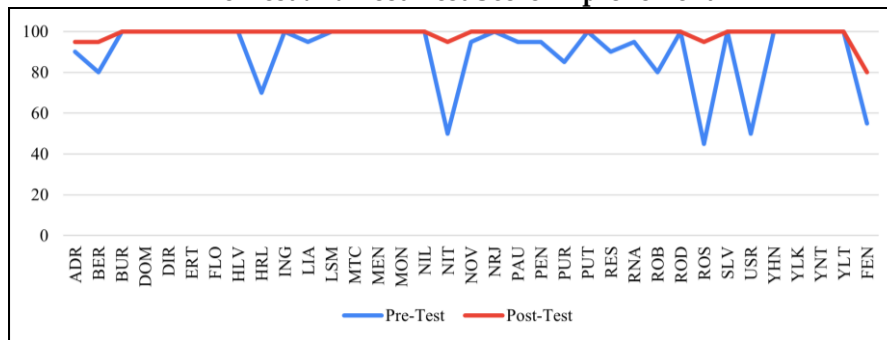
To quantify the impact of the intervention, a comparative analysis of Pre-Test and Post-Test scores was conducted.

Tabel 4.
Comparison of Pre-Test and Post-Test Results

No.	Category	Pre-Test	Post-Test	Gain
1	Highest Score	100	100	0
2	Lowest Score	45	80	35
3	Mean Average	90,7	98,4	0,88
4	Participants Passed	31 (88%)	35 (100%)	12%

Source: Processed Data, 2026

Figure 1.
Pre-Test and Post-Test Score Improvement



The graph depicts a line chart where the blue line (Pre-Test) shows fluctuations with deep dips for respondents ROS, USR, NIT, and FEN. The red line (Post-Test) flattens at the top (100) for almost all participants, with the lowest point raised significantly to 80, illustrating the "ceiling effect" of mastery and the elimination of low scores.

The data demonstrates a comprehensive improvement. The average score rose from 90.7 to 98.4. Crucially, the four participants who initially failed (scores of 45, 50, 50, 55) achieved mastery in the post-test (scores ≥ 80). This proves the intervention was highly effective for low-competence teachers.

To verify the significance of this improvement, a *Wilcoxon Signed Rank Test* was performed (as data was not normally distributed, Shapiro-Wilk $p < 0.05$). To describe the effectiveness was N-Gain Score.

Tabel 5.
Wilcoxon Signed Ranks Results

Ranks		N	Mean Rank	Sum of Ranks
Post-Test - Pre-Test	Negative Ranks	0 ^a	0,00	0,00
	Positive Ranks	15 ^b	8,00	120,00
	Ties	20 ^c		
Total		35		

Source: Processed Data, 2026

Tabel 6.
Wilcoxon Statistics Test Results

Test Statistics ^a	Post-Test - Pre-Test
Z	-3.433 ^b
Asymp. Sig. (2-tailed)	0,001

Tabel 7.
N-Gain Score Result

N	X Pre-test	X Post-Test	Post-Pre	Max-Pre	N-Gain
35	91	99	8,29	9	0,88
Penafsiran					Efektif

Statistical Analysis:

- 1) **Negative Ranks:** 0 (No teacher showed a decrease in score).
- 2) **Positive Ranks:** 15 (15 teachers improved their scores).
- 3) **Ties:** 20 (20 teachers maintained their high scores).
- 4) **Significance:** Asymp. Sig. (2-tailed) was **0.001** (< 0.05), indicating a statistically significant difference between Pre-Test and Post-Test scores.
- 5) **N-Gain Score:** 0.88, which is categorized as "Effective" ($g > 0.7$).

Participant Evaluation of the Program

At the end of the workshop, participants evaluated the program using a questionnaire (Likert scale 1-4).

Tabel 8.
Summary of Participant Evaluation Results

No.	Assessment Aspect	Mean Score	Category
1	Program Organization	3,01	Good
2	Training Materials	3,15	Good
3	Quality of Facilitator	3,09	Good
4	Benefits of Training	2,97	Quite Good
5	Participant Satisfaction	2,96	Quite Good
Total Mean		3,04	Good

Source: Processed Data, 2026

The training materials aspect received the highest rating (3,15), specifically the relevance of local wisdom integration (3,34). However, the schedule received a lower score (2,91), indication that despite flexibility, balancing training with school administration remains a challenge.

DISCUSSION

The discussion of this research integrates findings from the Look, Think, and Act cycles to answer the research problems regarding the initial condition to teachers, the implementation of the hyflex workshop, the improvement of competence, and the solutions to challenges encountered.

Existing Training Conditions and Modulea

Based on the data exposure in the Look phase, an interesting phenomenon was discovered regarding the initial condition of the teachers in the MGMP English teachers of Jayapura Regency. Descriptively, the average pre-test of teachers was classified as very high (90,7) with 77,1% of respondents in the very good category. However, qualitative data from interviews indicates significant obstacles in the practical compilation of contextual teaching materials.

The research findings show that English teachers in Jayapura Regency actually possess a mature conceptual understanding regarding the definition, function, and urgency of teaching materials. The high pre-test scores indicate that theoretically, teachers understand that teaching materials must be relevant to student needs. This aligns with the theory proposed by Tomlinson (2003), which states that teaching materials that are contextual and relevant to the lives of students will increase their motivation to learn.

However, this high *knowing what* (knowledge) has not been fully converted into *knowing how* (procedural knowledge). In interviews, teachers admitted they more often modify existing textbooks rather than compiling materials from scratch due to time constraints and lack of references. This condition emphasizes that teacher competence cannot be measured solely from the knowledge dimension. In accordance with UU No. 14 of 2005 concerning Teachers and Lecturers, competence is a set of knowledge, skills, and behaviors that must be possessed by teachers. In the context of this research, teachers have a good *knowledge* dimension (professional competence in theoretical aspects) but still need strengthening in the *skills* dimension (pedagogic competence in instructional design) to process local wisdom into ready-to-use teaching materials.

A crucial finding in the *Look* phase was the teachers' complaint regarding the difficulty of finding written references about local culture in English. This becomes an epistemological obstacle, where sources of local cultural knowledge (such as oral folktales or *Noken* philosophy) are abundant in the community but minimally documented in academic English texts. This fact is supported by Ibnu (2025), who highlights that many teachers underutilize local wisdom because it is often not integrated into formal curricula or standard textbooks.

Teachers in Jayapura face a double challenge: they must act as cultural researchers as well as translators/writers. Without special training, this cognitive load becomes too heavy, so it is natural that teachers finally return to relying on general teaching materials. Interview results revealed that the strategy most often used by teachers currently is "modifying textbooks to be more contextual". Although this strategy is not wrong, from the perspective of developing local wisdom-based teaching materials, Sarima et al. (2025) and Ashari et al. (2026) argues that if teachers merely modify, it often only touches the surface level, without inserting deep Papuan cultural philosophical values. Local wisdom such as the *Sasi* tradition or *Honai* philosophy possesses strong character values that need to be internalized. To achieve a deep level of integration, higher professional competence is needed, namely the ability to compile original teaching materials.

This finding strengthens the urgency of applying a training model that is not only theoretical but practical-productive. This is relevant to Knowles (1970) principles of Andragogy which underpin this research, that adults (teachers) require learning oriented towards solving real problems they face. An important point not revealed much in quantitative data but appearing strongly in qualitative data is the teachers' demand for training in the use of technology and AI. Teachers realize that the gap between the desire to compile teaching materials and time limitations can be bridged by technology.

Implementation of a Participatory Hyflex Workshop Using a Training Guide

The implementation of training in this research was designed to answer the geographical and time management challenges often faced by teachers in Jayapura Regency. Based on observation results in the *Act* phase, the application of the *Participatory Hyflex Workshop* model showed significant dynamic changes from Cycle 1 to Cycle 2.

Research findings in Cycle 1 showed technical obstacles in the form of internet signal instability, which caused participant participation to reach only 75%. However, in Cycle 2, participation increased to 95% after participants utilized the *asynchronous backup* features (recordings and LMS materials) and managed better signal locations. This phenomenon confirms the superiority of the basic principles of Hyflex proposed by Beatty (2007), namely *Learner Choice* and *Accessibility*.

In the context of the Jayapura Regency MGMP, the Hyflex model proved to provide a safety net for teachers. When the synchronous mode (Virtual Meeting) was hindered by infrastructure, the learning process did not stop because materials were available asynchronously in the LMS. This aligns with post-pandemic education research trends emphasizing that effective teacher training must be flexible and adaptive.

One of the main successes in this research was the creation of a strong participatory climate in Cycle 2. If in Cycle 1 interaction was still dominated by one-way communication between the facilitator and participants, then in Cycle 2 there was a shift towards *peer-review* and constructive discussion among fellow teachers. This change can be explained through Vygotsky's Social Constructivism theory, which states that learning becomes more optimal through social interaction in the *Zone of Proximal Development* (ZPD).

In the context of this training, the MGMP functioned as a *Community of Practice* as explained by Wenger (1998). Teachers who were initially hesitant to compile local wisdom teaching materials due to limited references gained confidence (scaffolding) through input from colleagues who possessed similar cultural knowledge.

The success of the Hyflex model implementation, marked by increased participation, proves that technological flexibility is key in overcoming geographical and infrastructural barriers in Jayapura Regency. This finding aligns with the research of Shen (2024), which states that the development of mixed online and offline teaching materials is very effective in bridging the education access gap. When compared with the research of Tapung (2024) which applied conventional face-to-face workshops, the Hyflex model in this study proved superior in maintaining teacher learning continuity through asynchronous features (LMS). This strategy is also supported by Supriyadi & Sari (2022), who found that e-module-based training was able to improve teacher professionalism independently. Furthermore, the teachers' success in adapting LMS and AI technology during training validates the findings of Asmayawati et al.(2024) that

technology-based curricular adaptation is crucial to support teacher digital literacy in the local Indonesian context. This indicates that Hyflex serves as a pedagogical strategy enabling personalized teacher learning.

Significant Improvement in Teacher Competence

The research results showed a statistically significant improvement in teacher competence, where the average Pre-Test score of 90.7 increased to 98.4 in the Post-Test, with a mastery level reaching 100%. This increase indicates that the *Participatory Hyflex Workshop* training model is effective in facilitating *Mastery Learning*, where all participants, without exception, succeeded in reaching the established competence standards. This aligns with professional development theory stating that structured and sustainable training interventions are capable of converting passive knowledge into measurable active competence.

Based on the inferential statistical analysis performed, the research results show a significant and effective improvement in teacher competence after the implementation of the Participatory Hyflex Workshop. This finding was confirmed through hypothesis testing using the *Wilcoxon Signed Ranks Test*, which produced a significance value (Asymp. Sig) of 0.001 ($p < 0.05$). This significance value statistically proves that the training intervention had a real impact on changing teacher competence, not just by chance. This is reinforced by the *N-Gain* calculation, which obtained a score of **0.88**, falling into the "Effective" category. The high effectiveness figure indicates that the training model combining access flexibility (Hyflex) and active collaboration (participatory) is highly relevant in addressing the learning needs of teachers in Jayapura Regency. This is consistent with Knowles (1980) principles of Andragogy, stating that adults learn most effectively when learning materials and methods are relevant to their professional lives and provide solutions to real problems faced, in this case, the difficulty of compiling contextual teaching materials.

An interesting phenomenon is seen from the dynamics of participant score distribution. Although initial data showed 20 participants had fixed scores (Ties) due to high initial scores where they had reached the maximum score since the Pre-Test, 15 participants experienced score improvements (Positive Ranks) without a single one experiencing a decrease (Negative Ranks = 0).

Specifically, the most crucial improvement occurred in the group of teachers who initially had below-standard competence (scores 45-55). Post-training, this group successfully jumped to the competent category with scores above 80, achieving 100% classical mastery. This success in equalizing competence can be explained through Vygotsky (1978) Social Constructivism theory, specifically the concept of the *Zone of Proximal Development* (ZPD). In the context of MGMP as a community of practice, teachers with lower competence received *scaffolding* or assistance from more proficient colleagues through collaborative discussion and *peer-review*. The Hyflex model facilitated this process by providing asynchronous learning spaces, allowing teachers who were lagging to replay recorded materials and digital modules at their own learning pace until they achieved mastery (*mastery learning*).

From the perspective of material integration, teachers succeeded in surpassing mere theoretical understanding towards technical ability in combining technology with cultural content (*Technological Pedagogical Content Knowledge* - TPACK). The ability of teachers to compile teaching materials that elevate Papuan local values using digital tools validates the research of Azhary & Fatimah (2024) that culturally relevant teaching materials will improve the quality of learning. Teachers no longer just adopt textbook materials but are capable of reconstructing contextual teaching materials, making English learning more meaningful for students in Jayapura Regency.

This competence improvement also covers the affective aspect, where participant reflection showed an increase in self-confidence (*self-efficacy*) and a sense of pride in elevating local culture. In accordance with Bandura (1991) theory, the experience of success in producing their own teaching material products during training became a key factor increasing teachers' belief in their abilities. This becomes important capital for program sustainability, because teachers who feel competent and confident tend to continue implementing local wisdom-based learning innovations in their classrooms consistently.

The implementation of training was not free from technical constraints, especially internet infrastructure instability which briefly lowered participant participation in the initial cycle. However, the application of the *asynchronous backup* strategy in the form of providing recordings and materials in the LMS proved effective in overcoming these obstacles, seen from the surge in participation in the second cycle.

This finding validates the core principle of *Accessibility* in Hyflex design according to Beatty (2007), which states that providing independent material access alternatives is key to ensuring learning equity for participants with infrastructure limitations. In the context of regions with signal constraints like Jayapura Regency, the flexibility of learning modes is not just a choice, but a fundamental necessity to guarantee program sustainability.

The challenge of time management due to teachers' administrative burdens was also a crucial issue. The solution applied in the form of flexibility in assignment submission deadlines proved capable of accommodating the dense work rhythm of teachers. This aligns with Malcolm Knowles' andragogy principles, emphasizing that adult learning must respect the autonomy and life conditions of participants. By giving time latitude, this training succeeded in turning time obstacles into opportunities for teachers to learn independently (*self-directed learning*) without sacrificing their professional obligations at school.

The absence of written references in English regarding local culture became a significant epistemological obstacle. The collaborative solution where teachers exchanged cultural knowledge (*peer-resource sharing*) and the use of AI technology succeeded in bridging this gap. This phenomenon supports Vygotsky's social constructivism theory, where knowledge is not absorbed passively from one source but constructed together through social interaction in a community of practice (MGMP). The MGMP proved to function effectively as a *collective intelligence system* capable of producing new relevant local knowledge, overcoming the limitations of available formal resources.

The main finding of this study demonstrates that the implementation of a Participatory Hyflex Workshop significantly improved the competence of English teachers in Jayapura Regency in developing local wisdom-based teaching materials. Teacher competence notably increased, with the average pre-test score rising from 90.7 to a post-test score of 98.4. This improvement also resulted in the participants achieving 100% classical completeness. The statistical analysis confirmed a significant difference between the pre-test and post-test averages. This significance is evidenced by a Wilcoxon Signed Ranks Test result with a Sig. value of 0.001. Furthermore, the intervention proved to be highly effective, supported by an N-Gain score of 0.88. In terms of engagement, the active participation of the teachers increased dramatically from 75% in the first cycle to 95% in the second cycle.

The novelty of this research lies in the specific application of the Participatory Hyflex model to address educational integration issues. There has been a notable lack of flexible, technology-integrated workshops specifically designed for English teachers in remote areas like Jayapura. This approach uniquely addresses geographical constraints and time limitations by offering flexible modes of participation. The flexible framework combines onsite, online synchronous, and online asynchronous learning methods. By blending social contexts with digital technology, the hybrid model encourages a comprehensive and rich learning experience. Furthermore, the system offers distinct advantages in facilitating real-time documentation and assessment. Ultimately, this specific framework provides a novel pathway to effectively overcome the epistemological barriers hindering teachers.

A major contribution of this action research is the successful creation of an integrated digital teaching material bank. This outcome was supported by the development of a highly valid and practical training guide housed within a Google Site LMS. Despite these contributions, the study identified limitations regarding time constraints due to administrative burdens. Participants often struggled to balance the flexible training schedule with their daily responsibilities. Additionally, internet instability caused frequent disconnections during the synchronous online sessions via Google Meet. Another critical limitation was the significant lack of available written English references pertaining to local cultural knowledge.

Consequently, it is recommended that future training initiatives optimize collaborative features and provide intensive technical assistance.

Based on the study's challenges, it is suggested that further researchers explore effective strategies to compile English references for local culture. Future researchers should aim to provide practical solutions that alleviate the time and administrative burdens placed on teachers. There is a need to further investigate how to maintain engagement and motivation when adapting curricula to local contexts. Researchers are also encouraged to study the adaptation of the Participatory Hyflex model in fostering inclusive learning communities. Studies could be expanded to explore the effectiveness of this model across other geographically challenged regions with difficult terrain. Furthermore, investigating the broader application of these flexible workshops could help solidify collaboration between teachers and stakeholders. These further inquiries will be essential in creating a generation with strong character based on local values.

CONCLUSION

In conclusion, this study confirms that the Participatory Hyflex Workshop is a highly effective intervention for enhancing the competence of English teachers in Jayapura Regency regarding the development of local wisdom-based teaching materials. While the initial diagnosis revealed a significant gap between the teachers' high theoretical knowledge and their limited practical skills due to resource constraints, the implementation of the two-cycle Hyflex model successfully bridged this disparity. The intervention resulted in a statistically significant improvement, with the average competence score rising from 90.7 to 98.4 and a comprehensive 100% mastery rate among participants. Crucially, the flexible nature of the Hyflex design, reinforced by asynchronous backups and peer collaboration within the MGMP, effectively overcame substantial infrastructural and administrative barriers, thereby increasing active participation from 75% to 95%. By transforming the teachers' collective challenges into opportunities for collaborative resource creation, this study demonstrates that adaptive, technology-integrated training is vital for remote regions. These findings imply that empowering teachers through flexible, participatory professional development not only improves technical skills but also ensures the sustainable integration of cultural values into English language pedagogy, creating a more meaningful learning experience for students.

REFERENCES

- Ajagbe, S. A., Olagunju, K. M., Osunade, O., Awokola, J. A., Oladosu, J. B., & Omidiora, E. O. (2023). Hybrid Learning System: Analysis, Opportunities, Challenges, and Prospects. *Sustainable Blended Learning in STEM Education for Students with Additional Needs*, 19–40.
- Aliyyah, R. (2020). Kompetensi Guru dan Implementasi Pembelajaran. *Jurnal Pendidikan*, 8(2), 120–135.
- Ashari, M., Dongka, R. H., Yulianti, A., Ananda, O. T., Fendiyanto, P., Suryan, M. B., Rohmah, L., Ardiansyah, M., Agus, C., & Oktaviana, D. (2026). *Platform Digital untuk Pembelajaran Mendalam*. CV. Gita Lentera.
- Ashari, M., Susanto, D. A., Susanti, R. S., Pramono, B., Muntazarah, F., Fitriani, A., Desmelinda, E., & Miza, L. P. (2025). *Strategi Mengajar dengan Pendekatan Pembelajaran Mendalam (PM) pada Pendidikan Dasar dan Menengah*. CV. Edu Akademi.
- Asmayawati, Yufiarti, & Yetti, E. (2024). Pedagogical innovation and curricular adaptation in enhancing digital literacy: A local wisdom approach for sustainable development in Indonesia context. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1), 100233. <https://doi.org/10.1016/j.joitmc.2024.100233>
- Azhary, L., & Fatimah, S. (2024). The Integration of Local Cultures in English Teaching Materials in Promoting Culturally Responsive Teaching. *AL-ISHLAH: Jurnal Pendidikan*, 16(2), 2045–2056. <https://doi.org/10.35445/alishlah.v16i2.4998>
- Bandura, A. (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes*, 50(2), 248–287.

- Beatty, B. J. (2007). Hybrid classes with flexible participation options–If you build it, how will they come. *2007 Annual Proceedings-Anaheim: Volume, 15*.
- Boelens, R., De Wever, B., & Voet, M. (2017). Four key challenges to the design of blended learning: A systematic literature review. *Educational Research Review, 22*, 1–18.
- Fitrianto, I., & Farisi, M. (2025). Integrating local wisdom into 21st century skills: A contextual framework for culturally relevant pedagogy in rural classrooms. *International Journal of Post Axial: Futuristic Teaching and Learning, 109–121*.
- Gibson, J. L., Ivancevich, J. M., & Donnelly, J. H. (2003). *Organizations: Behavior, structure, processes* (11th ed.). McGraw-Hill.
- Hamalik, O. (2007). *Pendidikan guru berdasarkan kompetensi*. Bumi Aksara.
- Hoy, W. K., & Miskel, C. G. (2008). *Educational administration: Theory, research, and practice* (8th Editio). McGraw-Hill.
- Ibnu, R. (2025). ANALISIS KURIKULUM IPS BERBASIS KEARIFAN LOKAL SD INPRES SIDANGA HALMAHERA TENGAH. *Jurnal Dinamis, 1(2)*, 69–77. <https://doi.org/10.33387/dinamispips>
- Indriyani, N. A. (2018). Pengembangan bahan ajar berbasis kearifan lokal untuk meningkatkan karakter siswa. *Jurnal Pendidikan Kontekstual, 3(1)*, 15–27.
- Izzah, I., Mulyadi, M., Walid, M., Padil, M., & Wahyudin, A. (2024). Strategic Management of Schools for Excellence: Integrating Quality Culture and Character Development in Leading Educational Institutions. *AL-ISHLAH: Jurnal Pendidikan, 16(4)*, 4654–4668. <https://doi.org/10.35445/alishlah.v16i4.5953>
- Jonassen, J., & Slavin, A. (2025). Implementation of local wisdom-based character education in elementary school learning. *Didaskalos Journal, 1(1)*, 10–16.
- Knowles, M. S. (1970). *The Modern Practice of Adult Education; Andragogy versus Pedagogy*.
- Knowles, M. S. (1980). *The Modern Practice of Adult Education: From Pedagogy to Andragogy*. Prentice Hall Regents.
- Kunandar. (2010). *Guru Profesional: Implementasi Kurikulum Tingkat Satuan Pendidikan (KTSP) dan Sukses dalam Sertifikasi Guru*. Rajawali Press.
- Lestari, I., & Wena, M. (2010). *Educational supervision: Concepts and applications*. Prenadamedia Group.
- Mahrinasari, M. S., Bangsawan, S., & Sabri, M. F. (2024). Local wisdom and Government's role in strengthening the sustainable competitive advantage of creative industries. *Heliyon, 10(10)*, e31133. <https://doi.org/10.1016/j.heliyon.2024.e31133>
- Mofu, J. R. (2021). *Revitalisasi nilai-nilai budaya lokal dalam kurikulum melalui pelatihan guru di Papua*.
- Mulenga, R., & Shilongo, H. (2025). Hybrid and blended learning models: innovations, challenges, and future directions in education. *Acta Pedagogica Asiana, 4(1)*, 1–13.
- Mulyasa, E. (2009). *Menjadi guru profesional: Menciptakan pembelajaran kreatif dan menyenangkan*. Remaja Rosdakarya.
- Mushtaq, D., & Iqbal, Z. (2024). Hybrid pedagogies: Assessing the effectiveness of blended and flipped learning in digital learning environments. *International Journal of Emerging Knowledge Studies, 3(09)*, 662–669.
- Purwanto, N. (2009). *Administrasi dan supervisi pendidikan*. Remaja Rosdakarya.
- Raes, A., Detienne, L., Windey, I., & Depaepe, F. (2020). A systematic literature review on synchronous hybrid learning: gaps identified. *Learning Environments Research, 23(3)*, 269–290.
- Robbins, P., & Alvy, H. B. (2003). *The principal's companion: Strategies and hints to make the job easier*. CA: Corwin Press.
- Rohayati, T., & Subekti, A. R. (2020). Pelatihan Pengembangan Bahan Ajar Berbasis Potensi Lokal dalam Meningkatkan Kompetensi Guru. *Jurnal Pendidikan Dan Kebudayaan*.
- Sadri, N. W., & Temaja, I. G. B. W. B. (2025). Local Wisdom-Based Education in Indonesian School. *The Eastasouth Journal of Learning and Educations, 3(03)*, 226–236.
- Sagala, S. (2010). *Konsep dan makna pembelajaran*. Alfabeta.

- Sari, M. P., & Handayani, T. (2021). Model workshop kolaboratif dalam peningkatan keterampilan guru menyusun perangkat pembelajaran kontekstual. *Seminar Nasional Hasil Penelitian SM Indo*.
- Sarima, S., Ashari, M., & Pistanty, M. A. (2025). Pendampingan Guru SD dalam Mengembangkan Bahan Ajar Sanitasi Berbasis AI di Wilayah Pembangunan 1 Kabupaten Jayapura. *Jurnal Abdi Insani*, 12(11), 6158–6166.
- Schein, E. H. (2004). *Organizational culture and leadership* (3rd ed.). CA: Jossey-Bass.
- Senge, P. M. (2000). *Schools that learn: A fifth discipline fieldbook for educators, parents, and everyone who cares about education*. Doubleday.
- Shen, J. (2024). Development of Online and Offline Mixed Teaching Materials for Higher Vocational Education Under the Background of Internet. *International Journal of E-Collaboration*, 20(1), 1–12. <https://doi.org/10.4018/IJeC.342124>
- Sudjana, D. (2007). Sistem dan manajemen pelatihan teori dan aplikasi. Bandung: Falah Production.
- Supriyadi, A., & Sari, F. W. (2022). Pelatihan pengembangan e-modul berbasis kearifan lokal untuk peningkatan profesionalisme guru di SMP Negeri 2 Kota Ternate. *Jurnal Kewarganegaraan*, 6(2), 4306–4312.
- Suyanto. (2006). *Menjadi guru profesional: Strategi meningkatkan kualitas guru di era global*. Erlangga.
- Tapung, M. (2024). Workshop on Preparation of Teaching Tools for Local Content of Manggarai Culture with a Culturally Responsive Teaching Model for Elementary School Teachers throughout Manggarai Regency. *Indonesian Journal of Social Technology*, 5(4), 1328.
- Tilaar, H. A. R. (2002). *Perubahan Sosial dan Pendidikan: Pengantar Pedagogik Transformatif untuk Indonesia*. PT Grasindo.
- Tomlinson, B. (2003). *Developing Materials for Language Teaching*. Continuum.
- UNESCO. (2024). Literacy: what you need to know. In *Literacy*. <https://www.unesco.org/en/literacy/need-know>
- Uno, H. B., & Mohamad, A. (2012). *Standar kompetensi dan sertifikasi guru*. Bumi Aksara.
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes* (Vol. 86). Harvard university press.
- Wenger, E. (1998). Communities of practice: Learning as a social system. *Systems Thinker*, 9(5), 2–3.
- Wonda, Y. A. (2022). *Integrasi kearifan lokal Papua dalam pembelajaran Bahasa Indonesia di SMP Kabupaten Jayapura*.
- Yuliani, E., & Prasetyo, Z. K. (2021). *Pengembangan modul ajar Bahasa Inggris berbasis kearifan lokal di Yogyakarta*. Deepublish.