

ARTICLE

# Collaboration Model in Blended Learning-Based Training: A Case Study at the Center for State Civil Apparatus Training, Development and Competency Mapping of the National Institute of Public Administration

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## ABSTRACT

This study proposes the collaboration model for implementing blended learning-based civil apparatus training programs. This study adopted a mixed-method approach, integrating quantitative and qualitative data into the Delphi process to develop a collaboration model for stakeholders in blended learning-based civil apparatus training. The results reveal a model describing the identification of the actors and their roles and the process and prerequisites in collaborating with the blended learning-based civil apparatus training programs. The study offers valuable insights for training institutions and stakeholders involved in similar initiatives, providing practical guidance derived from recommendations to enhance collaborative training practices, ultimately aiming to improve the effectiveness and efficiency of training programs.

## A. INTRODUCTION

Competency development is one of the strategies used to transform the management of State Civil Apparatus (ASN) into a world-class bureaucracy. The Grand Design of ASN Development 2020-2024 prepares the realisation of the Smart ASNs with integrity, nationalism, professionalism, global insight, information technology skills, foreign language skills, hospitality spirit, entrepreneurial spirit, and an extensive network (Wangsatmaja, 2019). Currently, civil servants or civil apparatus face various problems related to the hierarchy of positions, the unequal distribution of civil servants, and low competence. Regarding the competence of civil servants, several studies have shown that competence is crucial for improving performance in the public sector (Jiang et al., 2012; Kruyen & Van Genugten, 2020; Martínez et al., 2014).

From the policy perspective, Law No. 5 of 2014 concerning ASNs mandates every Government Agency to provide rights and opportunities for every ASN to develop their

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competence. Furthermore, Government Regulation No. 11 of 2017 states that competency development is an effort to meet the competency needs of civil servants (at least 20 hours of lessons in one year) based on job competency standards and employee career development plans.

Training is a form of competency development. Several studies have shown that training is related to competency improvement (Aditya et al., 2015; Ekaningsih, 2013; Mamun et al., 2019). According to the National Institute of Public Administration (NIPA) Regulation No. 10 of 2018, the training consists of classical and non-classical training. Classical training is competency development through face-to-face learning in the classroom. Meanwhile, non-classical training is on-the-job learning or learning outside the classroom. There are at least 12 classical and 12 non-classical training paths.

Based on previous studies, the blended learning method can reduce costs and resources in the learning process (Poon, 2013). In addition, it can reduce participants' time to attend training sessions (Holton et al., 2006). The Center for State Civil Apparatus Training and Development and Competency Mapping at the National Institute of Public Administration (Puslatbang PKASN LAN) has adopted the blended learning method since 2019 for basic training of civil servant candidates, Training Officer Course (TOC), Management of Training (MOT), and mental revolution training.

Collaboration is a strategy to increase the resources of training providers for the entire series of training activities, which consist of planning, implementation, and evaluation stages. Generally, the benefits of collaboration are providing innovative solutions to complex problems, avoiding duplication of activities, bringing together the various available resources, and improving program quality (Marek et al., 2015; Ramadass et al., 2017). In the context of blended learning, collaboration provides participants access to various communities, thereby increasing the ability of participants to apply new skills (Evans, 2006).

However, the collaboration process has not been implemented comprehensively by civil servant training institutions in Indonesia, especially in blended learning-based training. A previous study examined the collaborative training model to improve the competence of prospective principals (Wasitohadi, 2016). This research has identified the parties involved in the training collaboration and their roles and responsibilities. However, it has not explained in detail the training collaboration process. Therefore, it is necessary to formulate a collaborative model for civil servant training based on blended learning to guide training institutions.

Previous studies on blended learning have discussed practices, strategies, impacts, and factors influencing the success of blended learning (Abdalla et al., 2012; Ghareeb et al., 2016; Harris et al., 2009; Holton et al., 2006). In addition, previous studies have focused on the process of formal education in universities (Abdalla et al., 2012; Fearon et al., 2012; Weil et al., 2014). However, few studies have examined collaboration between actors in the blended learning-based training process for government employees. Therefore, this study fills this gap by formulating the collaboration process between actors in blended learning-based training for civil servants.

Thus, this study aims to formulate a collaborative model for blended learning-based civil servant training at the Puslatbang PKASN LAN. Specifically, this research examines various aspects of collaboration, namely: the driving factors (Ansell & Gash, 2007; Bryson, 2015; Emerson et al., 2011), actors and roles (Ju et al., 2014; Thomson & Perry, 2006; Ullah, 2016), structure (Ansell & Gash, 2007; Bryson, 2015; S. Kim, 2015), processes (Ansell & Gash, 2007; Emerson et al., 2011; Ju et al., 2014; S. Kim, 2015; Tucker et al., 2017; Ullah, 2016), outputs (Ansell & Gash, 2007; Bryson, 2015; S. Kim, 2015), and success factors (Ansell & Gash, 2007; Bryson, 2015; Ju et al., 2014; Nguyen & Tuamsuk, 2020; Ramadass et al., 2017; Vandenhouten et al., 2014).

## **B. LITERATURE REVIEW**

The blended learning approach is well-suited for adult education in today's digital era. This method offers flexibility and addresses time constraints by reducing the necessity for face-to-face interactions and facilitating more accessible access to learning materials (Cocquyt et al., 2019). Blended learning integrates online learning through technology with traditional learning interaction and participation (Thorne, 2003). The online class is a learning process that occurs entirely or mainly through the Internet (Means et al., 2013). The traditional class refers to face-to-face learning (Tayebinik & Puteh, 2013). Blended learning combines face-to-face and online instructional methods (Means et al., 2013), leveraging the benefits of each to enhance learning flexibility (Norberg et al., 2011). Adopting blended learning means restructuring the training design to increase participation and expand access to online learning (Law, 2019). Blended learning effectively combines various ways of delivering learning, teaching models, and learning styles in an interactive learning environment (Kaur, 2013). However, the blended learning approach is not one size fits all. It depends on various factors, including: 1) institutional goals and objectives; 2) alignment or institutional alignment; 3) organisational capacity; 4) operational terms and definitions; 5) development of educational/training institutions; 6) support systems; 7) reliable infrastructure; 8) data management; 9) proactive policy development; and 10) an effective funding model (Moskal et al., 2013). In addition, blended learning has five crucial elements: 1) collaboration, 2) online content, 3) live events or face-to-face learning, 4) assessment, and 5) reference materials (Carman, 2005).

Collaboration is a mutually beneficial relationship between various actors to achieve common goals (Ju et al., 2014; Thomson & Perry, 2006; Ullah, 2016). Collaboration can occur between government organisations and the government, private sector, and community (Ansell & Gash, 2007; Emerson et al., 2011; Thomson & Perry, 2006; Ullah, 2016). The collaboration process consists of 1) establishing communication/dialogue between actors, 2) building trust, 3) building mutual understanding, and 4) strengthening commitment among actors to carry out their roles/responsibilities. (Ansell & Gash, 2007; Emerson et al., 2011; Ju et al., 2014; S. Kim, 2015; Tucker et al., 2017; Ullah, 2016). Meanwhile, the drivers of collaboration include 1) limited resources; 2) opportunity; 3) incentives/benefits; 4) agreement for a common goal; 5) leadership support; 6) uncertainty/rapid environmental change; 7) a history of cooperation (Ansell & Gash, 2007; Bryson et al., 2015; Emerson et al., 2011). The success factors for collaboration are: 1) clear rules/mechanisms; 2) process transparency; 3) transformative leadership or leadership support; 4) collaboration capacity and competence of the parties; 5) organisational culture support (Ansell & Gash, 2007; Bryson et al., 2015; Ju et al., 2014; Nguyen & Tuamsuk, 2020; Ramadass et al., 2017; Vandenhousten et al., 2014).

Collaboration is one of the success factors for blended learning (Evans, 2006; Moore et al., 2006; Senkoylu et al., 2020). Collaboration can be done in the blended training process or between trainees. This study seeks to explain collaboration from the context of implementing blended learning. Therefore, collaboration in blended learning is defined as the relationship between various actors applying knowledge to achieve the expected learning objectives.

## **C. METHOD**

This study employed a mixed-method approach to delineate a collaboration model among stakeholders in blended learning-based civil servant training. It integrates quantitative and qualitative data into the Delphi process as a framework or model construction technique. Utilising mixed methodology within the Delphi arena has become a valuable and more holistic approach adopted by academics and decision-makers in addressing complex real-world issues to assist in identifying preferred future alternatives (Quinlivan & Dunphy, 2023). The Delphi

technique aims to gather ideas and build consensus (Kim & Yeo, 2018). Dalkey and Helmer (1963) suggested that the Delphi technique was designed to obtain consensus from experts by using controlled questionnaires and feedback (Fefer et al., 2016). Therefore, the collection of ideas and the agreement of experts become the basis for building a collaborative model in implementing blended learning-based training that can be used practically and academically.

This study was conducted at the Puslatbang PKASN LAN. It is one of the civil servant training centres that conduct training using blended learning and is the work unit that carries out the most training compared to others. In addition, the Puslatbang PKASN LAN has collaborated with several parties to organise training.

The data collection technique at the pre-Delphi stage was the literature study. At this stage, the qualitative approach was employed to study and explore the concept of collaboration models from various literature sources. Data was extracted from training documents at the Puslatbang PKASN LAN to develop a collaboration model framework.

At the Delphi stage, the data collection methods encompassed qualitative and quantitative approaches.

1. They were determining the expert for the Delphi panel. It can be done through snowball sampling (Habibi et al., 2014). Researchers must be able to identify experts and selection criteria to determine the Delphi panel (Kim & Yeo, 2018). This study determined that the members of the Delphi panel were those with extensive knowledge and experience in managing blended learning-based training. These experts included training managers and teachers (*Widyaiswara*).
2. They were developing a questionnaire to collect expert opinions. Questionnaires can be prepared using a Likert scale (Habibi et al., 2014). This study set a scale using nine points from 0 (never) – to 9 (very often) to indicate the frequency of collaboration aspects in blended learning-based training at the Puslatbang PKASN LAN.
3. They collected data for at least two or three rounds (Fefer et al., 2016; Kim & Yeo, 2018). The first round used an open questionnaire. The questionnaire was designed to collect specific information from the Delphi panel. Then, the researchers used this information to develop a structured questionnaire for the second round. In the second round, the Delphi panel reviewed the information gathered from the first round. The Delphi panel assessed the priority aspects and identified which were approved and which were not. In the third round, the Delphi panel reviewed and re-evaluated their summary of assessments from the previous round. In addition, the Delphi panel clarified/explained their choices (Kim & Yeo, 2018). This study conducted two rounds of data collection because the Delphi panel has reached an agreement. The first round aims to collect specific information from experts regarding collaboration models in blended learning-based training. In the second round, the experts reviewed the collaboration model and agreed.

The data processing and analysis phase measures the consensus and results analysis level. The level of consensus was calculated using the mean, median, standard deviation, individual interview, and the Kendall coefficient of correspondence (Habibi et al., 2014; Kim & Yeo, 2018). Meanwhile, the results were analysed using the extraction of dimensions and sub-dimensions (Kim & Yeo, 2018). Finally, the research findings summarise and interpret the qualitative and quantitative results.

The validity and reliability of data in the Delphi research process were ensured by employing a methodological journal containing detailed rules regarding the entire research process from inception to conclusion, documenting critical methodological decisions made throughout the study for qualitative and quantitative data verification (Brady, 2015).

## **D. RESULT AND DISCUSSION**

### **Elaboration of A Collaborative Model in Blended Learning-Based Training**

At the pre-Delphi stage, we developed a collaborative model of blended learning-based training based on theories and policies. The model consists of several dimensions, namely 1) actors and their roles, 2) collaboration driving factors, 3) collaboration structure, 4) collaboration process, 5) collaboration outputs, and 6) collaboration success factors.

The actor dimensions and their roles are driving collaboration in blended learning-based training. Based on theory and policy, the actor of partnership is a civil servant training provider consisting of training institutions owned by the government, private sector, state-owned enterprises, and other institutions involved in organising blended learning-based training. The role of the actors is to carry out collaborative training for civil servants based on blended learning according to their capacities.

The driving factors for collaboration in blended learning training based on theory and policy are: 1) the limited resources of the actors to carry out blended learning-based civil servant training independently; 2) availability of opportunities for collaboration which means the political/institutional environment provides opportunities to collaborate for actors on civil servant training based on blended learning; 3) availability of intensive or collaboration benefits in organising blended learning-based civil servant training; 4) availability of agreement on common goals to be achieved in organising civil servant training based on blended learning; 5) leadership that encourages collaboration by initiating, providing resources, and supporting the implementation of collaborative civil servant training based on blended learning; 6) uncertainty or rapid environmental changes will encourage collaboration in implementing blended learning-based civil servant training; 7) history of a previous collaboration between the parties in organising blended learning-based civil servant training.

The collaboration structure dimension is defined as a norm, a rule, and a structure for implementing collaboration in blended learning-based civil servant training. The dimensions of the collaboration process in blended learning-based training consist of several steps, including 1) communication and negotiations among collaborators, 2) building trust between collaborative actors, 3) reaching mutual agreements to understand the common goals, and 4) ensuring commitment among actors to effectively fulfil their roles and achieve the agreed-upon goals in the collaboration process.

The output of the collaboration is implementing blended learning-based training, which has several aspects. **First**, training participants are civil or non-civil servants who meet the requirements (administrative, rank and class, position, age limit, assignment) to join in certain types of training and can actively participate in the training process. **Second**, teaching staff are civil servants/academicians/practitioners with the duties, responsibilities, authorities, and rights to carry out activities to educate and train civil servants, as well as evaluate and develop training at government training institutions in a professional and multidisciplinary manner. **Third**, the training model and content. The training model is a strategy or approach to training activities through online (asynchronous and synchronous) and offline (face-to-face) training to achieve training objectives.

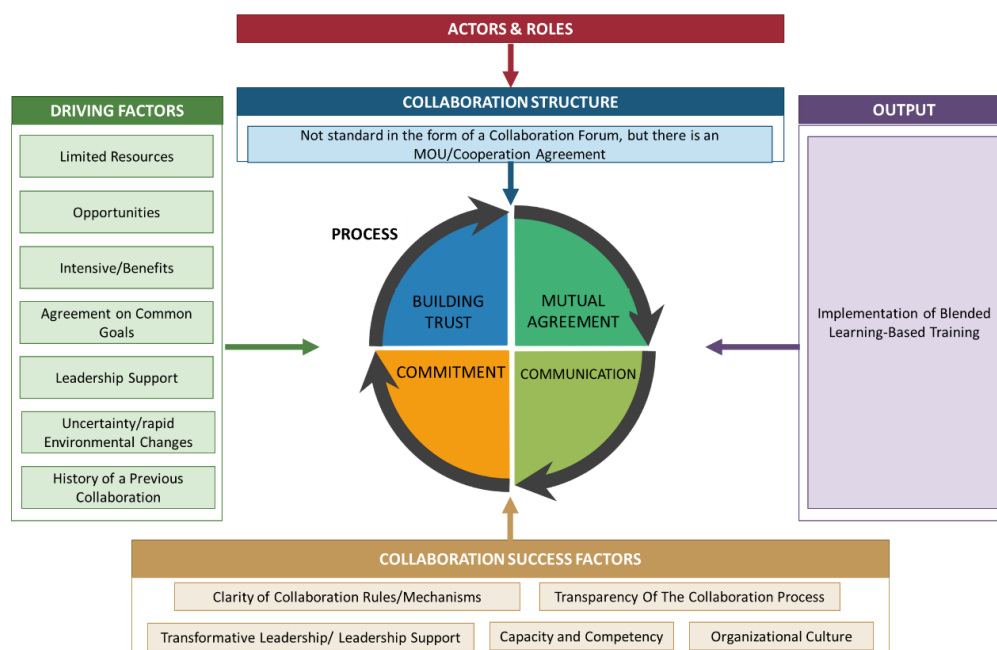
Meanwhile, the training content consists of text, audio, and video training materials to improve competence according to the training objectives. **Fourth**, the technology in blended learning refers to an online platform system that is reliable, strong, and supported by fast and stable internet access. **Fifth**, learning support consists of academic and technical support. Academic support focuses on assisting trainees in developing effective learning strategies. It includes (1) training planning for training venue and time, participants, learning schedules,

training personnel, and training facilities and infrastructures; (2) the training curriculum, namely the suitability of the structure of the education and training subjects with competency targets in training; (3) management of the training program starting from the process of planning, implementation, monitoring, and evaluation, to the results; (4) preparation of plans, curricula, and management of training programs in training modules/guidelines for participants; (5) training data management to facilitate evaluation and adjustment of training methods to suit the needs of participants; (6) Human resources for training providers who support academic training, namely (a) managers of training institutions who functionally plan, implement, supervise, control, and evaluate training programs; (b) training information system manager who updates training data.

Meanwhile, technical support aims to help participants understand training technology and how to use it. Technical support consists of training facilities (movable objects) and infrastructures (immovable objects). Technical human resources are training organisers who manage administrative matters. **Sixth**, institutions refer to the norms or rules in organising training. It includes (1) a comprehensive and sustainable training strategic plan for one to five years, (2) budget availability and training budget management, and (3) training quality assurance.

The final dimension is collaboration success factors in blended learning-based training. It consists of 1) clarity of collaboration rules/mechanisms; 2) transparency of the collaboration process; 3) transformative leadership that initiates, provides resources, and supports collaborative training; 4) collaboration capacity and competence of the parties; and 5) organisational culture that supports collaboration. Regarding competence, the skills needed are interpersonal understanding, openness to collaboration, concern for the common good, ability to work across boundaries, capability to analyse and involve stakeholders, engagement in strategic planning, and participation in teamwork. Meanwhile, the organisational culture that supports collaborative blended learning training is a work environment that is dynamic, flexible, professional, harmonious, and respects diversity.

Figure 1 illustrates the collaboration model in blended learning-based training at the pre-Delphi stage.



(Source: Elaborated by the authors)

Figure 1. Collaboration Model in Blended Learning-Based Training Based on Elaboration of Theory and Policy

## Collaborative Models in Blended Learning-Based Training at the Puslatbang PKASN LAN

Based on the results of Delphi data analysis, the following are the opinions and agreements of the panellists regarding aspects of the collaboration model in blended learning-based training at the Puslatbang PKASN LAN.

### 1. Actors of Collaboration (Collaborators)

During the pre-Delphi stage, the actors identified as potential collaborators in the blended learning-based training included training institutions owned by central, provincial, district, and city governments, the private sector, state-owned enterprises, and other institutions. Meanwhile, Table 1 shows the results of panellist opinions using the Delphi technique regarding the actors involved in collaborative blended learning-based training at the Puslatbang PKASN LAN.

Table 1. Data Analysis Results using the Delphi Method for the Collaborator Aspect

No	Collaboration Aspects	Round I					Round II						
		Mean	IR	Evaluation		Z	Rank	Mean	IR	Evaluation		Z	Rank
				Std Dev	IR					Std Dev	IR		
<b>A Actors of Collaboration (Collaborators)</b>													
1	Central government training institute	6.13	3	kon	div	2.042	1	6.63	2	kon	kon	3.313	1
2	Provincial government training institute	5.00	3	div	div	1.667	2	5.63	3	div	div	1.875	2
3	District government training institute	4.63	7	div	div	0.661	3	4.25	7	div	div	0.607	4
4	City government training institute	4.13	7	div	div	0.589	4	4.88	8	kon	div	0.609	3
5	Private training institute	0.00	0	kon	kon			0.00	0	kon	kon	0	0
6	BUMN training institute	0.25	0	kon	kon			0.00	0	kon	kon	0	0
7	Other training institutions	0.00	0	kon	kon			0.00	0	kon	kon	0	0

Source: Data Analysis Results, 2021

Table 1 shows that during the Delphi round I, panellists' opinions regarding actors of collaboration in blended learning-based training at the Puslatbang LAN varied. The only agreement reached among panellists concerned the actors who had never participated in such collaborations. Specifically, Puslatbang PKASN LAN had never collaborated with training institutions owned by the private sector, state-owned enterprises, and other institutions. In Delphi Round II, the panellists agreed that the actors collaborating on blended learning-based training were central government training institutes. This consensus was based on Puslatbang PKASN LAN's previous collaboration with the Indonesian Police Administration Education Center (Pusdikmin Polri) for Level II National Leadership Training (PKN). This finding aligns with prior research that highlights the iterative nature of collaboration and the significance of leveraging past experiences to refine collaborative processes over time (Thomson & Perry, 2006).

### 2. Collaboration Driving Factors

From the results of a literature review, several factors can encourage the collaboration process: the limited resources of each actor, opportunities to collaborate, incentives/benefits of collaborating, agreement on common goals, leadership support, uncertainty/rapid environmental change, and a history of collaboration in the past. Table 2 shows the results of data analysis of panellists' opinions using the Delphi technique regarding the driving factors for blended learning-based training collaboration at the PKASN LAN Training Center.

Table 2. Data Analysis Results using the Delphi Method for Collaboration Driving Factors

No	Collaboration Aspects	Round I					Round II						
		Mean	IR	Evaluation		Z	Rank	Mean	IR	Evaluation		Z	Rank
				Std Dev	IR					Std Dev	IR		
<b>B Collaboration Driving Factors</b>													
1	Limited Resources	5.88	3	div	div	1.958	4	6.25	3	div	div	2.083	7
2	Opportunities	6.13	2	kon	kon	3.063	1	6.50	1	kon	kon	6.500	1
3	Intensive/Benefits	6.25	3	kon	div	2.083	3	6.75	3	kon	div	2.250	3
4	Agreement of Common Goals	5.13	3	div	div	1.708	6	6.38	3	kon	div	2.125	6
5	Leadership Support	5.25	3	div	div	1.750	5	6.63	3	kon	div	2.208	4
6	Uncertainty/Rapid Environmental Changes	5.00	4	div	div	1.250	7	6.50	3	div	div	2.167	5
7	History of a Previous Collaboration	5.50	2	kon	kon	2.750	2	5.88	2	kon	kon	2.938	2

Source: Data Analysis Results, 2021

Table 2 shows the results of Delphi rounds I and II. According to the panellists, the driving factors of collaboration in blended learning-based training at the Puslatbang PKASN LAN were the opportunities and the history of collaborations. The panellists considered that the main factor encouraging collaboration at the Puslatbang PKASN LAN is the opportunity for collaboration.

This opportunity can be realised due to NIPA's policy (legal basis) regulating and encouraging collaboration processes, collaboration requests from the central and regional government training institutions, and the encouragement of high leadership in NIPA to collaborate on training delivery. This finding aligns with a previous study that explained the roles external elements like laws and policies play in forming collaborative governance regimes and underscored the need for supportive institutional environments, like NIPA, to promote productive collaboration (Thomson & Perry, 2006). Furthermore, another study emphasised the importance of engaging stakeholders in decision-making processes (Ansell & Gash, 2007).

The panellists noted that the extensive collaboration experiences of Puslatbang PKASN LAN with both central and regional government training institutions serve as catalysts, encouraging and facilitating the organisation of blended learning-based training initiatives through collaborative mechanisms. This finding is consistent with research indicating that favourable circumstances at the beginning of the collaboration, such as a shared vision and a history of previous cooperation and mutual respect among stakeholders, can significantly ease collaborative endeavours (Ansell & Gash, 2007).

### 3. Collaboration Structure

Collaboration structures are the norms and rules guiding collaborative processes and dynamic, agile organisational structures (Bryson et al., 2015). This study's identified collaboration structure is a non-standard form, represented by an MOU/Cooperation Agreement. Table 3 presents the panellists' opinions on the form of the collaboration structure used in implementing blended learning-based training at the Puslatbang PKASN LAN.

Table 3. Data Analysis Results using the Delphi Method for Collaboration Structure

No	Collaboration Aspects	Round I					Round II						
		Mean	IR	Evaluation		Z	Rank	Mean	IR	Evaluation		Z	Rank
				Std Dev	IR					Std Dev	IR		
<b>C Collaboration Structure</b>													
	Non-standard/formal structure by formulating an MOU/Collaboration Agreement	5.38	2	kon	kon	2.688	1	5.50	1	kon	kon	5.500	1

Source: Data analysis results, 2021

The Delphi results in Rounds I and II in Table 3 show that the panellists agreed that the collaboration structure in blended learning-based training at the Puslatbang PKASN LAN was a non-standard/formal structure by formulating an MOU/Collaboration Agreement. In Puslatbang PKASN LAN, collaborative blended learning-based training does not use a

standardised structure. The basis of collaboration is the MOU/ Collaboration Agreement and the trust between the two parties. This finding highlights the significance of embracing adaptable governance structures, as recommended by prior research, which can be adjusted to different needs throughout the collaboration's lifecycle (Bryson, 2015).

#### 4. Collaboration Process

Some experts argued that a collaboration process consists of several activities: 1) communication/negotiation, 2) building trust, 3) building mutual agreement; and 4) commitment among collaborators (Ansell & Gash, 2007; Emerson et al., 2011; Ju et al., 2014; Kim, 2015; Tucker et al., 2017; Ullah, 2016). Table 4 shows the panellists' opinions about how the collaboration process often occurs in blended learning-based training at the Puslatbang PKASN LAN.

Table 4. Data Analysis Results using the Delphi Method for Collaboration Process

No	Collaboration Aspects	Round I					Round II						
		Mean	IR	Evaluation Std Dev	IR	Z	Rank	Mean	IR	Evaluation Std Dev	IR	Z	Rank
<b>D Collaboration Process</b>													
1	Communication/Negotiation	6.88	1	kon	kon	6.875	1	7.63	1	kon	kon	7.625	1
2	Building Trust	6.38	2	kon	kon	3.188	2	7.00	2	kon	kon	3.500	2
3	Building Mutual Agreement	6.63	3	kon	div	2.208	4	7.25	3	kon	div	2.417	4
4	Commitment	6.25	2	kon	kon	3.125	3	6.88	2	kon	kon	3.438	3

Source: Data analysis results, 2021

The panellists agreed at Delphi Rounds I and II that the collaboration process in blended learning-based training at the Puslatbang PKASN LAN consisted of three processes between the parties involved. The three processes are communication and negotiation, building trust, and commitment to carry out their roles and responsibilities. This process is crucial to achieving the expected collaboration goals. Panellists revealed that the communication process must be maintained and cared for because it directly affects other processes and the achievement of collaboration outputs. Meanwhile, the panellists considered that the understanding between the parties was included in the communication process and became an integral part of every stage of the training. This finding aligns with earlier research that underscores communication as fundamental to successful collaboration (Ansell & Gash, 2007; Ju et al., 2014). Additionally, previous studies highlighted the significance of face-to-face communication in fostering credible commitment, reinforcing the importance of effective communication in collaborative pursuits (Thomson & Perry, 2006).

#### 5. Collaboration Output

The output components in collaborative training based on blended learning consist of training participants, teaching staff, training models and content, technology, learning support, and institutions (Wang et al., 2015). Table 5 shows the panellists' opinions regarding the collaboration outputs in blended learning-based training at the Puslatbang PKASN LAN.

Table 5. Data Analysis Results using the Delphi Method for Collaboration Output

No	Collaboration Aspects	Round I					Round II						
		Mean	IR	Evaluation		Z	Rank	Mean	IR	Evaluation		Z	Rank
				Std Dev	IR					Std Dev	IR		
<b>E Collaboration Output</b>													
1	Training Participants	7.00	3	div	div	2.333	3	7.75	2	kon	kon	3.875	2
2	Teaching Staff	7.38	1	kon	kon	7.375	1	7.88	2	kon	kon	3.938	1
3	Training Model and Content	6.75	3	div	div	2.250	4	7.63	3	div	div	2.542	4
4	Technology	6.50	3	kon	div	2.167	6	7.50	3	kon	div	2.500	5
5	Learning Support (Academic & Technical Support)	6.63	3	kon	div	2.208	5	7.63	2	kon	kon	3.813	3
6	Institutions (Planning, Financing, Quality Assurance)	7.13	2	kon	kon	3.563	2	7.75	2	kon	kon	3.875	2

Source: Data analysis results, 2021

Table 5 shows the panellists' opinions of the Delphi Round I regarding the output from the collaboration process of blended learning-based training at Puslatbang PKASN LAN. Their opinions were diverse at this phase. In Delphi Round II, the panellists agreed that frequent collaboration outputs are teaching staff, training participants, institutions, and learning support. Besides, the primary collaboration output of blended learning-based training at the Puslatbang PKASN LAN is the teaching staff. Moreover, panellists stated that the collaboration parties have different human resources, planning, and financing capacities. If these resources collaborate sufficiently, blended learning-based learning will meet the expected goals. In addition, each party also has potential participants with different training needs. Therefore, the collaboration mechanism should be adapted to facilitate the needs of all participants. This finding aligns with previous research (Hew & Cheung, 2014), which reveals that institutional support, teaching staff, and participants are the main prerequisites for the success of blended learning-based learning. The training model and content are not the collaboration output because the training policy regulates and defines them. Additionally, the panellists argued that technology presents challenges for collaboration due to its reliance on the availability and compatibility of software, hardware, and human resources.

### 6. Collaboration Success Factors

Several factors drive successful collaboration: clarity of rules, transparency on processes, leadership support, collaboration capacities and competencies, and organisational culture. Table 6 shows the panellists' opinions regarding the collaboration success factors in blended learning-based training at the Puslatbang PKASN LAN.

Table 6. Data Analysis results using the Delphi Method for Collaboration Success Factors

No	Collaboration Aspects	Round I					Round II						
		Mean	IR	Evaluation		Z	Rank	Mean	IR	Evaluation		Z	Rank
				Std Dev	IR					Std Dev	IR		
<b>F Collaboration Success Factors</b>													
1	Clarity of Collaboration Rules/Mechanisms	5.88	3	kon	div	1.958	3	7.50	2	kon	kon	3.750	3
2	Transparency of The Collaboration Process	6.75	1	kon	kon	6.750	1	7.63	1	kon	kon	7.625	2
3	Transformative Leadership/ Leadership Support	6.75	1	kon	kon	6.750	1	7.75	1	kon	kon	7.750	1
4	Capacity and Competency of Collaboration	6.63	1	kon	kon	6.625	2	7.75	1	kon	kon	7.750	1
5	Organizational Culture	5.75	3	kon	div	1.917	4	6.75	2	kon	kon	3.375	4

Source: Data analysis results, 2021

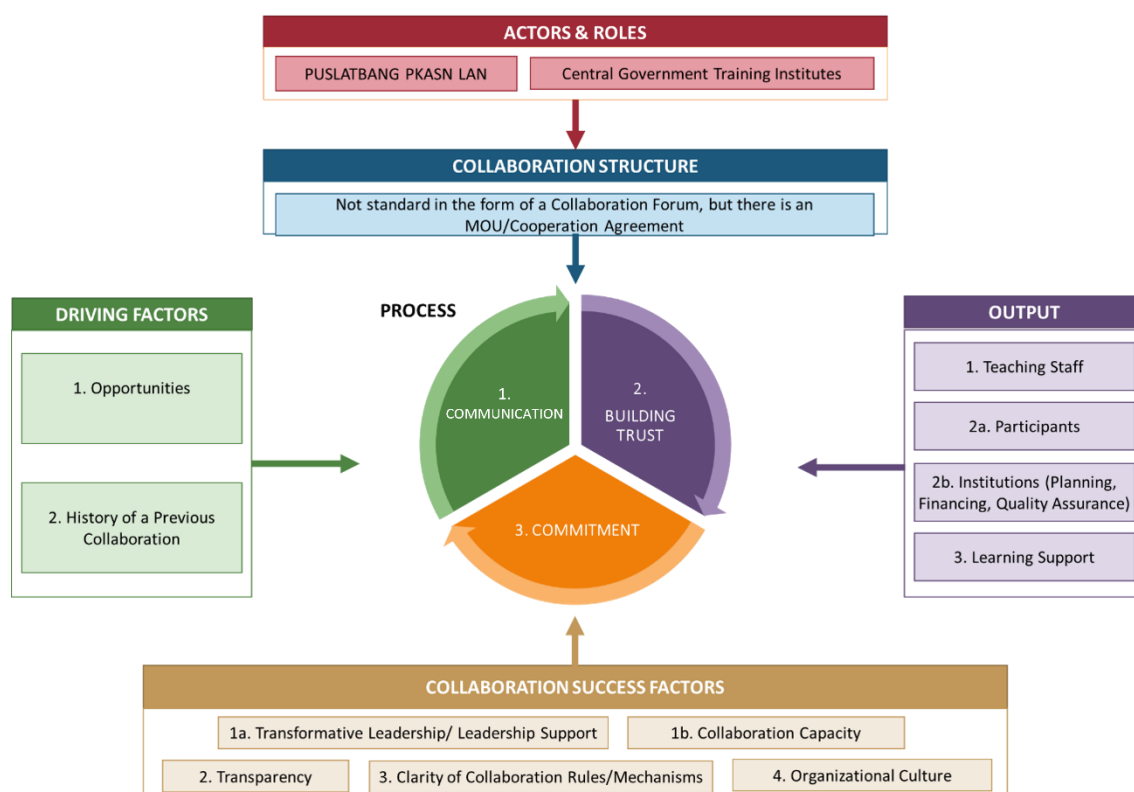
In Delphi Phase I, the panellists agreed on three key factors contributing to collaboration success in blended learning-based training at the Puslatbang PKASN LAN. In Delphi Phase II, these success factors expanded into five aspects. However, the most critical factors remain leadership that supports collaboration, collaboration capacities and competencies, and transparency in the collaboration process.

Panelists stated that the leader's decisions impact the success of the collaboration through blended learning-based training. This finding echoes earlier research, emphasising the vital importance of leadership in collaborative endeavours. Specifically, empirical studies highlight

the crucial role of committed leaders who transcend boundaries, known as sponsors and champions, in driving successful collaborations by implementing clear guidelines, building trust, and promoting dialogue (Ansell & Gash, 2007; Bryson, 2015).

Capacity and competence are also crucial because they affect the optimisation of collaboration. Previous studies indicate that individuals and organisations become more dependable and productive collaborators when they exhibit certain attitudes, competencies, and capabilities (Bryson, 2015). Furthermore, successful collaboration leadership requires organisational and interpersonal skills and fairness in fulfilling roles (Ju et al., 2014). Moreover, the panellists said that transparency would increase trust between the parties.

Figure 2 presents the formulation of a collaboration model for blended learning-based training at the Puslatbang PKASN LAN.



(Source: Developed by the authors)

Figure 2. Collaboration Model for Blended Learning-Based Training at the Puslatbang PKASN LAN

## E. CONCLUSION

This study presents several conclusions regarding the collaboration model in blended learning-based training at the Puslatbang PKASN LAN. Collaboration actors (collaborators) are central government training institutes. The main factors that encourage collaboration are the opportunities for collaboration and the history of cooperation in the past. The collaboration structure is a non-standard/formal form formulated through an MOU/Cooperation Agreement. The collaboration processes involve communication and negotiation, building trust, and ensuring commitment between the parties to fulfil their roles and responsibilities. The collaboration outputs include teaching staff, training participants, institutions, and learning support. The factors contributing to collaboration success are supportive leadership,

collaboration capacities and competencies, transparency, clarity of rules/mechanisms, and organisational culture.

The collaboration model for blended learning-based training at the Puslatbang PKASN LAN differs from the theoretical and policy-driven models, particularly in driving factors. For Puslatbang PKASN LAN, the main driving factors for collaboration are opportunities and positive past experiences. While the success factors align with theoretical models—supportive leadership, capacities, competencies, transparency, clear rules, and organisational culture—the panellists prioritised leadership and capacity. Additionally, effective communication is crucial for building understanding, trust, and commitment. The output aspect also shows differences; the standard outputs at Puslatbang PKASN LAN are teaching staff, training participants, institutions, and learning support, whereas technology and content remain challenging due to infrastructure, human resources, and policy issues.

Based on the research findings on the blended learning-based training collaboration model at Puslatbang PKASN LAN, practical recommendations are made for training institutions. Collaborative training can be conducted with various actors/institutions if both parties share common goals. The driving factors for collaboration depend on both parties' backgrounds, conditions, and needs. However, leadership support and the collaboration capacity of actors are significant factors influencing success. Good communication is crucial in the collaboration process to maintain trust and commitment between parties. The collaboration output should align with the agreed-upon common goals, providing a clear roadmap for future collaborative efforts.

The findings of this study are subject to limitations, as the development of a collaborative training organisation model relies solely on theoretical reviews and experiences from Puslatbang PKASN LAN. Consequently, further research is warranted to validate this model across diverse training institutions at varying levels.

### Contributorship

Conceptualization (Shafiera Amalia, Susy Ella, Rosita Novi Andari). Methodology (Shafiera Amalia, Rosita Novi Andari). Data collection, analysis, and writing of the original draft (All authors). Translate the manuscript (Susy Ella), write reviews, and proofread (Susy Ella, Rosita Novi Andari). Visualization (Susy Ella, Rosita Novi Andari).

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