

# DOES SERVICE QUALITY IN EDUCATION AND TRAINING PROCESS MATTERS?

## STUDY OF GOVERNMENT'S HUMAN RESOURCE AGENCIES IN INDONESIA

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### ABSTRACT

This study aims to investigate the application of service quality theory to explain and predict the satisfaction, trust, and motivation of participants at leadership education and training programs of echelon 3 and 4 held by Human Resource Development Board Province in Indonesia. This study uses purposive sampling and survey methods to generate sampling, which consists of 480 respondents from some of the main provinces in Indonesia. The data are analyzed using Variance Based Structural Equation Modeling - Partial Least Square due to the existence of formative indicators for service quality. The result shows that five dimensions of service quality have a positive and significant effect on participants' satisfaction, which, in turn, impacts their trust and motivation. Responsiveness is one of service quality dimensions with the greatest influence on participants' satisfaction. Data collected in this study are limited to the context of leadership education and training programs of echelon 3 and 4. Thus, further research may involve other education and training programs. The results of this study may serve as a guideline for other education and training providers in other provinces or places of Indonesia to increase their service quality, which will impact satisfaction, trust, and motivation of participants.

### KEYWORDS

**Government employees, motivation, satisfaction, service quality, training, trust**

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### Highlights

- The service quality model is used to predict satisfaction, trust, and motivation of participants at leadership education and training programs of echelons 3 and 4.
- The data are analyzed using Variance Based SEM (SEM-PLS) due to the existence of formative indicators for service quality.
- 5 dimensions of service quality have a positive and significant effect on participants' satisfaction, which, in turn, impacts their trust and motivation.
- Responsiveness has the greatest influence on participants' satisfaction.
- Service quality has an indirect influence on motivation through satisfaction.

### INTRODUCTION

Indonesia's government regulate education and training for officers in civil state apparatus/government employees (CSA) with Code of Rule Head of State Administration Agency, Number 19, year 2015 (LAN, 2015a) which regulates leadership education and training programs for echelon 3

and PERKALAN 20 year 2015 for leadership education and training programs of echelon 4 (echelon 4 is a lower rank officers than echelon 3) (LAN, 2015b). These codes of rules are set with specific objectives. Leadership education and training programs of echelon 3 aims to form high-ability officers in leading structural and functional CSAs with lower

rank, including other stakeholders to increase their motivation in optimizing the use of resources in order to accomplish the state province's vision, along with building synergies between ministries, institutions, and provinces in handling various strategic national issues (LAN, 2015a). While, leadership education and training programs of echelon 4 aim to improve operational leadership competencies including the ability to initiate planning of agency activities, influence and mobilize subordinates and strategic stakeholders to execute planned activities (LAN, 2015b). As a requirement to advance in their career and acquired strategic offices and positions in government organizations, CSAs have to complete education and training of echelon 3 and echelon 4.

Based on the explanation above, these required competencies of echelon 3 and echelon 4 structural officers are crucial. With the increasing demand on these competencies for structural officers in central or regional government institutions/agencies, the existence of Human Resource Development Board Province (HRDBP) as a province government institution mandated to execute education and training for CSAs is considered to be critical (Budiyanti, Papiro, and Nurman, 2018). This mandate required HRDBP to manage a satisfactory education and training programs for CSAs in every province or region of Indonesia to establish an adequate CSAs well suited for their tasks and position in every government office in the country.

The central government obligates every HRDBP in Indonesia to be accredited by The National Institute of Public Administration (NIPA), which is given every four years. This accreditation will decide types of education and training programs allow to be held by each HRDBP in Indonesia. The higher the accreditation score for HRDBP, the more type of education and training programs are allowed to be held by the HRDBP. For example, HRDBP with A grade accreditation allows to held leadership education and training programs for echelon 2, while HRDBP with B grade accreditation only allows organizing leadership education and training programs for maximum echelon 3 level (echelon 2 level is higher than echelon 3 level). One of the valuation items in accreditation is service quality provided by HRDBP. Service quality is considered to be an essential element as the government has decided to regulate it with a specific code of law, PERKALAN no. 25 the year 2015, where the quality of education and training process in a government institution is guarantee.

Thus, HRDBP in every province, as one of the education, training and development organizations of CSAs, need to maintain and improve their quality of service not only for accreditation purpose but also due to the competition between other education, training, and development of government agencies. This competition arises from the selection right of participants regarding education and training institutions as a service provider (such as NIPA, which is a national agency for education and training of CSAs or HRDBP in other provinces) to complete their education and training program. However, despite the importance of service quality for HRDBP, based on our preliminary study in HRDBP South Sulawesi and Central Sulawesi provinces, services quality provided was under expectations and numbers of

complaints from leadership training for echelon 3 and echelon 4 participants during the learning process were arising.

Based on records on numbers of complaints in education and training programs held at HRDBP of South and Central Sulawesi, it has shown arise in approximately around 2.3% from the year 2013 until 2018. This phenomenon is also confirmed by the initial interviews with 100 participants of leadership training for echelon 3 and 4, where 65 respondents expressed their dissatisfaction with the services provided by HRDBP, 35 respondents expressed satisfaction, while three others were abstained. In general, respondents are complaining about the facilitator's qualities, study and building facilities, and food qualities, among other things. These records and interviews transcript indicate that leadership education and training participants of echelon 3 and echelon 4 were not satisfied with services quality provided by HRDBP of Central Sulawesi and South Sulawesi province during the educational and training process. Therefore, it will affect the satisfaction of leadership training participants of echelon 3 and 4, which will impact their trust and motivation.

The first gap of this study is closely related to the concept of service quality. Over the past few decades, the quality of service has become a major concern for practitioners and researchers since service quality have a strong influence on business performance, lower operational costs, customer satisfaction, customer loyalty, and profitability (Singh and Khanduja, 2010). One of the popular model in service quality and often used in various research in the field of service is the Service Quality (SERVQUAL) model proposed by Parasuraman, Zeithaml, and Berry (1985) in their research (Kassim and Abdullah, 2010; Saleem, Zahra, and Yaseen, 2017; Kloutsiniotis and Mihail, 2018). However, this model has several limitations, especially in terms of its use for service providers in the education sector as stated by Hsiao and Lin (2008) and Ramseook-Munhurrin, Lukea-bhiwajee and Naidoo (2010).

Throughout time, the SERVQUAL model has been widely adopted in assessing the quality of services in the field of education (Ramseook-Munhurrin, Lukea-bhiwajee and Naidoo, 2010). These researchers employed the modified SERVQUAL model, which adjusted to the context of educational services in finding the effect of service quality on student satisfaction.

Based on the literature review from previous studies (for example: Cuthbert (1996); Pariseau and McDaniel (1997); McAdam and Welsh (2000); Chua, (2004); Davies, Douglas and Douglas (2007); Oliveira and Ferreira (2009)) regarding implementation of service quality in education sector, dimensions measurement employed for service quality deliver different and inconsistent results, also none of these studies were conducted in the context of training and education for government employees. In line with a study conducted by Leonnard (2018) on the application of SERVQUAL dimension in explaining and predicting the satisfactions of university students in Indonesia, this study focuses on the application of the service quality model of Parasuraman, Zeithaml and Berry (1985) in the education and training for government employees conducted by HRDBP, especially leadership

education and training programs for echelon 3 and echelon 4. The second gap is related to the relationship between service quality and other variables, such as trust. Trust needs to be explored deeply regarding the relationship between service quality and customer satisfaction (Amorim and Saghezchi, 2014). In line with Amorim and Saghezchi (2014), several studies such as Laaksonen, Jarimo and Kulmata (2009), Kassim and Abdullah (2010), and Lien et al (2014) conclude that at full length, researches in the field of service quality rarely reveal the relationship of trust with customer satisfaction or customer loyalty. Furthermore, according to them, studies in the field of service quality are still lacking in revealing the relationship between SERVQUAL variables with customer trust, customer emotions, and customer moods.

Therefore, this study aims to acknowledge the relationship between service quality in training and education program of government employees with the trust of training participants, which is formed by their satisfaction. Several studies conducted in the field of education regarding service quality (such as: Oliveira and Ferreira (2009); Ramseok-Munhurrin, Lukea-bhiwajee and Naidoo (2010); Sharabi (2013); Sweis et al. (2016); Subrahmanyam (2017)) have failed to acknowledge the role of trust in the relationship between service quality and satisfaction. Thus, there is an urgency to observe such relations as trust is a crucial factor in shaping long-term relationships between service industries and customers (Kassim and Abdullah, 2010).

Concerning training motivation, the education and training field is different from other service fields. As a result of the fundamental relation of the education and training field with participant involvement in terms of cognition and needs. However, the services of education and training field, as well as education field in general, are different from other professional services due to its important role in the life of training participants who need considerable motivation and intellectual skills to achieve their goals (Gruber et al., 2010). The motivation for training participants has an important role in achieving success during a sustainable education and training process. As stated by Stukalina (2010) that the education process is a cycle process where service quality provided by the education agency, as a service provider, will influence the motivation of participants during the education process, which will further improve the quality of the process. As for the process of education and training, service quality provided by the service provider will affect the motivation of education and training participants. Thus, the service quality of education institutions may influence motivation and intellectual skills of students in achieving their objectives (Gruber et al., 2010). Overall, this study accounts for participants' trust and participants' motivation as independent variables, which is formed by participants' satisfaction, whereas participants' satisfaction is shaped by the service quality of the education and training agency.

The third gap in this study concerns the use of indicators in measuring service quality dimensions. Based on the literature review, throughout time, constructs of service quality are treated as constructs with reflective indicators (O'Cass and Carlson, 2012). For example on studies, such as: Cronin

and Taylor (1992) Parasuraman, Zeithaml and Berry (1994), Akbar and Parvez (2009), Ahmed et al. (2010), Kassim and Abdullah (2010), Butt and Aftab (2013), Subrahmanyam and Bellamkonda (2012, 2016); and Subrahmanyam, (2017). However, O'Cass and Carlson (2012) state that service quality constructs with formative indicators is highly superior. In line with their study, Collier and Bienstock (2009) also state that errors in the specification model of service quality must be carefully considered since service quality formed by constructs with both formative and reflective indicators would have different interpretations.

Based on the study conducted by Collier and Bienstock (2009), service quality formed by constructs with formative indicators has a greater significant effect on customer satisfaction compared to constructs with reflective indicators. Their study is also in line with Rabaa'i (2015) who finds evidence that service quality has a higher construct validity with formative indicators. Thus, in this study, the service quality of HRDBP is treated as constructs with formative indicators.

Therefore, the main purpose of this study is to investigate the application of service quality theory to explain and predict the satisfaction, trust, and motivation of participants (government employees) at leadership education and training programs of echelon 3 and 4 held by Human Resource Development Board Province (HRDBP) in Indonesia. The following sections in this paper will discuss the theoretical background, research method, result and analysis, and conclusion.

## THEORETICAL BACKGROUND

### Service quality in education and training agency

Service quality is a global assessment or attitude relating to a particular service, overall customer impression, or organizational advantage and services (Silvestri, Aquiliani, and Ruggieri, 2017). In delivering services, quality is an important element that must be examined in services, especially in the education and training field. Service quality is crucial as it has a direct impact on the image of the service provider itself (Lien et al., 2014).

Lien et al. (2014) and Silvestri, Aquiliani, and Ruggieri (2017) state that the dimensions of service quality are identified through a study by Parasuraman, Zeithaml and Berry (1985: 48) known as SERVQUAL (Service Quality), as follows:

1. **Tangibles.** The appearance, facilities, and physical infrastructure of the company and the condition of the surrounding environment is explicit evidence of the services provided by the service provider.
2. **Reliability.** The ability to provide services as promised, trusted, accurate, consistent, and in line with expectations.
3. **Responsiveness.** The readiness of employees in serving customers, speed in the transaction process, and handling customer complaints.
4. **Assurance.** The ability of employees to deliver confidence and trust in line with given promises to costumers.
5. **Empathy.** The willingness of employees and employers to give deep and exceptional attention to customers by understanding their needs and desires.

Many researchers (e.g., Cuthbert (1996); Pariseau and McDaniel (1997); McAdam and Welsh (2000); Chua, (2004); Davies, Douglas and Douglas (2007); and Oliveira and Ferreira (2009)) use SERVQUAL dimensions in assessing service quality in education. However, these studies provide different and inconsistent results. Subrahmanyam, Bellamkonda, and Mishra (2013) state that measuring service quality in the education field is a difficult task related to its unique dimensions and characteristics. This is confirmed by the existence of various literature written by various, researchers (e.g. Subrahmanyam and Bellamkonda, 2016; Oliveira and Ferreira, 2009; Blass and Weight, 2005; Cornuel, 2005; and Chua, 2004) who identify causes and consequences of service quality in the education field.

Based on these literatures, service quality indicators for education field are obtained as measured by students' perception. Thus, training participants, as the context of this study, act as customers and are largely influenced by the service quality of education and training agency. Hence, they are considered as essential customers by training providers (Abili et al., 2012).

### **Training participants satisfaction**

According to Schiffman and Wisenblit (2015), satisfaction is the feeling of an individual pleasure or disappointment resulting from comparing the perceived performance of products or services with expectations. Whereas, Cronin and Taylor (1992) state that customer satisfaction is a post-purchase evaluation or results from evaluation after comparing perception with expectations (Kassim and Abdullah, 2010; Fatima and Razzaque, 2014; Saleem, Zahra, and Yaseen, 2017)

In the education field, the concept of participants' satisfaction has been discussed extensively. Students' satisfaction, as well as education and training participants' satisfaction, which is influenced by the quality of education providers have been investigated by various researchers, such as Silvestri, Aquiliani, and Ruggieri (2017) and Subrahmanyam, (2017). Moreover, Ahmed et al. (2010) find evidence that university service quality has a significant effect on student satisfaction. Therefore, there is an agreement among researchers that there is a causal relationship between the quality of education services and students' satisfaction (Silvestri, Aquiliani, and Ruggieri, 2017; Subrahmanyam, 2017). Thus, in the education and training field, education, and training participants' satisfaction is influenced by the quality of the education and training provider/agency.

### **Training participants trust**

Some studies consider customer trust to be an important factor that plays a significant role in the success of delivering public services, for example, Fatima and Razzaque (2014); Kloutsiniotis and Mihail (2018) and Budiyanti, Yamin and Patiro, (2019). A thorough understanding on the concept of trust initiated by Parasuraman, Zeithaml and Berry (1985) is required, who view that customers must have trust in the organization/company.

Customers will feel safe in conducting transactions

with the company where transactions are guaranteed with certainty. Therefore, the organization/company can meet customer needs if the concept of trust consists of reliability and integrity. Thus, trust plays an important role in the long-term relationships between customers and organizations/companies, especially involving customer trust regarding quality, reliability, and the integrity of services delivered by the company (Butt and Aftab, 2013; Lien et al., 2014).

### **Training participants motivation**

Robbins and Judge (2015) state that motivation is a mental process that relates to intention, direction, and individual efforts in achieving their objectives. According to their study, there are popular motivational theories, such as Maslow's motivation theory proposed by Abraham Maslow based on five levels of human needs; x theory and y theory proposed by Douglas McGregor; the motivation-hygiene theory proposed by Frederick Herzberg; theory of the need for achievement proposed by David McClelland; and self-determination theory proposed by Deci et al. Generally, the concept of training participants' motivation is derived from these motivational theories. For example, studies conducted by Eccles and Wigfield (2002) and Meyer and Turner (2006) concluded that, according to the theory of the need for achievement, academic performance and achievements of students are significantly influenced by teaching quality, classroom environment, and students motivation, as well as emotional factors and cognition. Furthermore, according to these studies, students' motivation facilitates learning and improves their performance in the educational environment (Subrahmanyam, 2017).

In terms of education, the desire to develop self ability is constantly related to the training participants' motivation during the education and training process (Dermitzaki, Vavougiou, and Kotsis, 2012; Di Serio, Ibáñez, and Kloos, 2013; Furió et al., 2015). According to these studies, the level of training participants' motivation illustrates their contribution and involvement in the learning environment. In line with this, Skinner and Belmont (1993) state that training participants who are active and highly motivated will automatically be involved directly in the learning process voluntarily. This finding also confirmed by Dermitzaki, Vavougiou and Kotsis (2012) and Di Serio, Ibáñez, and Kloos (2013) who conclude that the learning point of view describes not only the change of attention towards cognition but also the motivation of training participants and factors underlying the achievement of effectiveness and usefulness of learning.

### **The relationship of service quality with education and training participants' satisfaction**

Parasuraman, Zeithaml and Berry (1988) identify five dimensions of SERVQUAL, namely: tangibles, reliability, responsiveness, assurance, and empathy. These five aspects of service quality, when applied together, will build excellent quality and satisfying services, this result is in line with Lien et al. (2014) and Silvestri, Aquiliani, and Ruggieri (2017).



Moreover, Lovelock and Gummesson (2004) find evidence that service quality has a positive and significant influence on customer satisfaction. The maintenance of service quality may minimize the occurrence of customer dissatisfaction. Participants' satisfaction in leadership education and training for echelon 3 and 4 is determined through their perceptions of services acquired from education and training agency during the education and training process. Eventually, the level of satisfaction will direct participants of leadership training for echelon 3 and 4 to the overall perception of the service quality provided by HRDBP. Thus, hypotheses in this study are stated as follow:

- Hypothesis 1 (H1): Service quality of HRDBP from tangibles (physical evidence) aspect has a positive effect on the satisfaction of participants in leadership training of echelon 3 and 4.
- Hypothesis 2 (H2): Service quality of HRDBP from reliability (physical evidence) aspect has a positive effect on the satisfaction of participants in leadership training of echelon 3 and 4.
- Hypothesis 3 (H3): Service quality of HRDBP from responsiveness aspect has a positive effect on the satisfaction of participants in leadership training of echelon 3 and 4.
- Hypothesis 4 (H4): Service quality of HRDBP from empathy aspect has a positive effect on the satisfaction of participants in leadership training of echelon 3 and 4.
- Hypothesis 5 (H5): Service quality of HRDBP from assurance aspect has a positive effect on the satisfaction of participants in leadership training of echelon 3 and 4.

### **The effect of training participants ,satisfaction toward trust**

Trust is defined as the formation of psychological intentions to accept risks based on the expectations of other people's intentions or behavior (Fatima and Razzaque, 2014; Kloutsiniotis and Mihail, 2018). Trust is a catalytic critical construct in transactional relationships. In various literature, especially in the marketing field, regarding the relationship between commitment and trust, trust has been conceptualized as something that arises when one party has confidence toward reliability and integrity of other parties (Farndale, Hope-Hailey and Kelliher, 2011; Alfes, Shantz, and Truss 2012).

Gwinner, Gremler, and Bitner (1998) found evidence that trust is the benefit of belief valued by customers in long-term exchange relationships with service providers/organizations. Thus, in this study, participants' trust of leadership training of echelon 3 and 4 towards HRDP will be well-conceived when

they feel satisfied with its service quality. Therefore, the next hypothesis in this study is stated as follow:

- Hypothesis 6 (H6): Satisfaction of participants in leadership education and training of echelon 3 and 4 has a positive effect on trust toward HRDBP

### **The effect of training participant satisfaction toward motivation**

A research conducted by Hufton, Elliot, and Illushin (2003) found evidence that integrated administrative processes and adequate academic relationships will increase students' motivation during the learning process. Education and training program is a long and continuous process as the factor quality of education and training agency is essential for trainees' participation to achieve success in education and training process. Participants of education and training program will try to fulfill their needs and satisfaction toward education and training agency, which in turn motivates them during the education and training process (Cook and Artino, 2016).

As argued by Wolfgang and Dowling (1981) that education agencies must be capable of identifying needs and motivations of their students and make appropriate adjustments to the service quality and administrative procedures. Furthermore, they also emphasized that poor service quality from lecturers, administrative staff, and other officers would discourage students, which will affect their success in the education process.

In the education field, Ahmed et al. (2010) explored the relationship between service quality, satisfaction, and motivation in universities using the SERVQUAL model. Their results show that the service quality of university has a significant effect on the satisfaction and motivation of students where the satisfaction of students will increase their motivation during the education process. Furthermore, Sobral (2004) also showed that motivation of medical students is significantly influenced by their perceptions of service quality of education provider (medical faculties) due to its value and meaning of experience during the educational process. He also found evidence that students' perceptions toward service quality of education providers will form their satisfaction, which impacts their motivation during their educational process. Therefore, the next hypothesis in this study is stated as follow:

- Hypothesis 7 (H7): Satisfaction of participants in leadership education and training of echelon 3 and 4 in HRDBP has a positive effect on motivation.

Thus, based on previous literature review and development of hypotheses, this research model is depicted in figure 1.

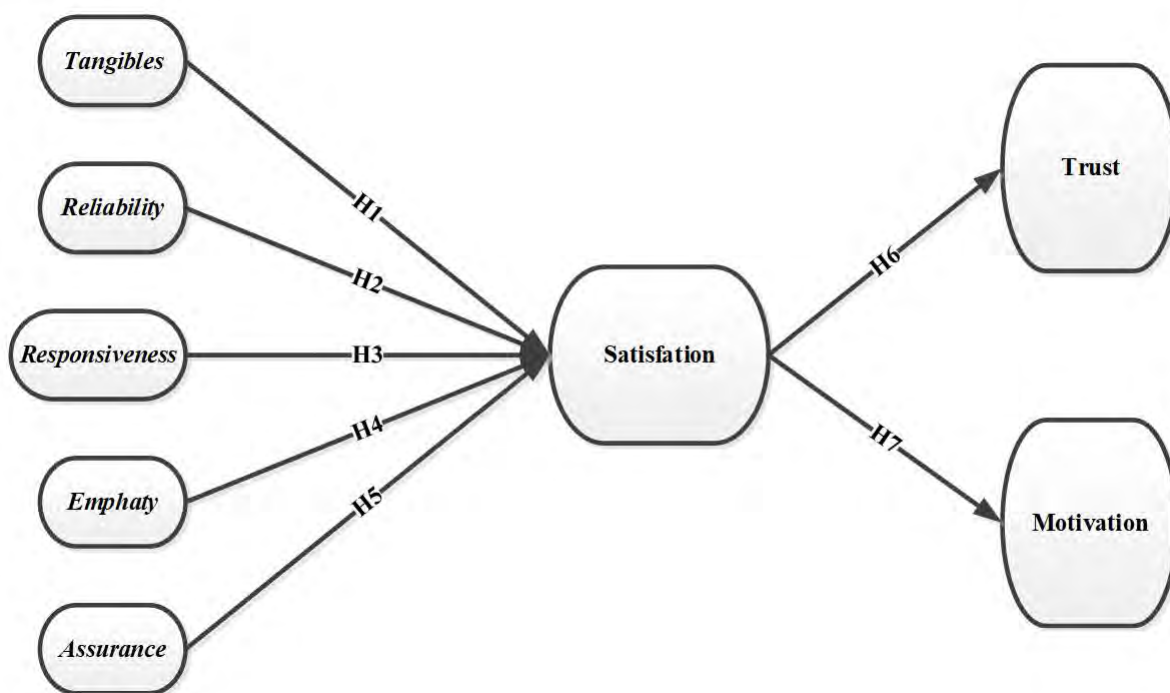


Figure 1: Research Model (by authors)

## METHODS

This study consist of two stages conducted from March 2018 until September 2018. The first stage is an explanatory study aims to identify all indicators related to the perception of participants in education and training programs of echelon 3 and 4 regarding the quality of service provider. This step is necessary to discern their conformity with indicators of SERVQUAL dimension as proposed by Parasuraman, Zeithaml, and Berry (1985), along with their rate of satisfaction, trust, and motivation. Moreover, validity and reliability testing of indicators provided from the initial interview is also performed at the first stage. The following stage is conducted to reveal the relation between constructs in the study.

Stage one was conducted in March 2018 until May 2018 as a preliminary study aims to determine the accuracy of SERVQUAL dimensions by Parasuraman, Zeithaml and Berry (1985) when applied in the education and training field. For this purpose, trainees of HRDBP of Central and South Sulawesi were given inquiries regarding attributes of service quality necessarily inherent by training agency, as well as the level of their satisfaction, trust, and learning motivation. In this stage, an initial interview was conducted with 30 participants of leadership training of echelon 3 and 4 in HRDBP of Central and South Sulawesi regarding perceived service quality, satisfaction, trust, and motivation. Results of the interview in stage one are set as the basis for developing questionnaire items, which combined with measurement items of each construct developed by previous researchers. From questionnaire development in stage one, 32 indicators were acquired for 8 constructs used in this study.

Furthermore, questionnaires were sent back to 200

participants of leadership training of echelon 3 and 4 in HRDBP of Central and South Sulawesi. However, only 175 (response rate of 87.5%) questionnaires were returned with 120 completed feasible questionnaires to be analyzed. Results from these questionnaires were processed using SPSS program to perform Factor Analysis (FA). Based on the FA results, 3 of 32 indicators were removed due to their loading factor value was below 0.6. These indicators are indicator 1 (HRDBP always gives accurate information on time), and indicator 2 (HRDBP provides services in a timely matter) of reliability constructs, and indicator 1 (HRDBP can conduct a superior education and training program) of assurance constructs. Thus, there are 29 indicators to measure 8 constructs in this study. The eight constructs consist of education and training agency properties such as learning facilities, reliability, responsiveness, empathy, assurance, and education and training participant's properties such as satisfaction, trust, and motivation.

The second phase of this study involved sending questionnaires to all respondents, namely all participants of education and training leadership program of echelon 3 and 4 in HRDBP of several main provinces of Indonesia, such as, DKI Jakarta (the capital city of Indonesia), East Java, South Sulawesi, Central Sulawesi and North Sumatra. These provinces are chosen as sample studies since they represent the main islands in Indonesia region, which are Java, Sumatra, and Sulawesi.

The Sampling method of this study is non-probability sampling with a purposive sampling technique. The determination of sample size in this study is closely related to the use of Structural Equation Modeling (SEM) Partial Least Square (PLS) as data analysis. The main reason for using SEM-PLS is the existence of five constructs

with formative indicators, namely tangible, reliability, responsiveness, assurance, and empathy.

The minimum sample size when using PLS-SEM was 5-10 multiplied by the number of indicators ( Gefen, Rigdon and Straub, 2011). As indicators in this study are 29 indicators, thus, the minimum sample size is  $10 \times 29 = 290$ . This study decides to use a sample size of 600 respondents. However, of 600 questionnaires distributed, only 510 were returned, and only 480 were feasible for further analysis. Thus the response rate in this study is 80%, which is within a minimum requirement for further analyzes (Neuman, 2014). In this study, the construct of service quality was measured using indicators developed by Parasuraman, Zeithaml and Berry (1985; 1988) and have been used extensively by some writers, such as, Lien et al., (2014); Annamdevula Subrahmanyam (2017) and Silvestri, Aquiliani, and Ruggieri (2017). Constructs of satisfaction and trust in training participants were measured using indicators developed by Ribbink et al. (2004). The Construct of participants' motivation is measured using indicators developed by Zimmerman (2008). The construct measurement scale in this study uses a Likert scale, 1 to 5, 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree.

### Data analysis technique

Structural Equation Modeling (SEM) by Warp PLS 6 and SPSS software is applied as a data analysis technique. The data analysis method in this study applies SEM two-step approach, namely: the measurement model and the structural model proposed by Anderson and Gerbing (1988). Model testing determines from criteria of Goodness of Fit (GOF), according to Tenenhaus Amato and Espito Vinzi (2004) for variance-based SEM models.

## RESULTS AND DISCUSSIONS

### Measurement Model Testing (construct validity)

Table 1 (results of discriminant and convergence validity) demonstrates constructs of satisfaction, trust, and motivation (reflective indicators) with a satisfactory convergence validity where the value of AVE (Average Variance Extracted) exceeds 0.5 (Hair et al., 2010, 2011, 2012). While AVE value for constructs of service quality (tangible, reliability, responsiveness, empathy, and assurance), which are formative indicators are empty or no value, and this is very common for formative indicators. Moreover, table 1 shows that Cronbach alpha and composite reliability values of each reflective construct (satisfaction, trust, and motivation) exceed 0.7, so it can be stated that the three reflective constructs in this study are reliable (Hair et al., 2010, 2011, 2012).

Indicators use in this research are derived from SERVQUAL dimensions from Parasuraman, Zeitham, and Berry (1985) for formative constructs. For example, tangible indicators are related to the building and study facilities. Reliability indicators are how lecturers provide their service at the time they promise to do, and they perform service right the first time. Responsiveness indicators are how lecturers are never too busy to repond to the participants' reques, and lecturers give prompt service. Assurance indicators are how lecturers instill confidence in participants, and lecturers have the knowledge to answer participants' questions. Empathy indicators are how lecturers give personal attention to each participant, and lecturers understand participants' specific needs.

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While for reflective constructs such as satisfaction, trust and motivation, we use 4 indicators for each construct. For example, satisfaction indicators are how participants feel content and comfortable during the study process. Trust indicators are how lecturers have adequate proffesional qualification, and have the ability to serve participants well. Motivation indicators are how participants perceived to be well respected by their peers during the study process, and the programs will have direct influence on the improvement of participants' productivity.

In this study, the method of reliability test employ is composite reliability due to its superiority in estimating internal consistency (Hair et al., 2010, 2011, 2012). For formative constructs, results in Table 1 show that weight indicator value for indicators on each of five constructs (tangible, reliability, responsiveness, empathy, and assurance) is significant with  $p$  values  $<0.001$  and  $p <0.05$ . Additionally, the Variance Inflation Factors (VIF) value of these constructs is under 3.3, which is in line with (Kock, 2013). Hence, all indicators in five formative constructs (tangible, reliability, responsiveness, empathy, and assurance) are adequate for the next stage, the structural model measurement stage.

Constructs (Cronbach Alpha)	Indicators	Loading Factor	Composite Reliability	AVE (Average Variance Extracted)	p-value	VIF
Tangible	T1	0.636			<0.001	1.255
	T2	0.673			<0.001	1.332
	T3	0.841			<0.001	1.908
	T4	0.814			<0.001	2.035
Reliability	REL3	0.755			<0.001	1.459
	REL4	0.755			<0.001	1.540
Responsiveness	RESP1	0.748			<0.001	1.970
	RESP2	0.827			<0.001	2.145
	RESP3	0.642			<0.001	1.357
	RESP4	0.661			<0.001	1.349
Assurance	ASS2	0.826			<0.001	1.394
	ASS3	0.805			<0.001	1.327
	ASS4	0.624			<0.001	1.312
Emphaty	EMP1	0.788			<0.001	2.053
	EMP2	0.775			<0.001	1.996
	EMP3	0.791			<0.001	2.004
	EMP4	0.817			<0.001	2.155
Satisfaction (0.917)	KEP1	0.601	0.795	0.594		
	KEP2	0.694				
	KEP3	0.798				
	KEP4	0.705				
Trust (0.787)	TR1	0.900	0.939	0.891		
	TR2	0.923				
	TR3	0.877				
	TR4	0.862				
Motivation (0.718)	M1	0.703	0.822	0.536		
	M2	0.701				
	M3	0.763				
	M4	0.758				

**Table 1: Discriminant and convergence validity results**

Table 2 shows the results of discriminant validity testing for all constructs. Testing results are performed by comparing the AVE root values (values located diagonally in the table) with the correlation value between each construct. If the

AVE root value is greater than the correlation value between each construct, then constructs apply in this study have an acceptable discriminant validity (Hair et al., 2010, 2011, 2012).

Construct	1	2	3	4	5	6	7	8
1 Tangible	<b>0.759</b>	0.452	0.424	0.426	0.263	0.519	0.333	0.609
2 Reliability	0.452	<b>0.725</b>	0.546	0.526	0.386	0.542	0.270	0.678
3 Responsiveness	0.424	0.546	<b>0.738</b>	0.613	0.544	0.697	0.220	0.607
4 Assurance	0.426	0.526	0.613	<b>0.747</b>	0.541	0.207	0.285	0.690
5 Emphaty	0.263	0.386	0.544	0.541	<b>0.828</b>	0.675	0.198	0.610
6 Satisfaction	0.519	0.542	0.697	0.207	0.675	<b>0.719</b>	0.338	0.653
7 Trust	0.333	0.270	0.220	0.285	0.198	0.338	<b>0.895</b>	0.167
8 Motivation	0.609	0.678	0.607	0.690	0.610	0.653	0.167	<b>0.732</b>

**Table 2: Squared Root of AVE and Correlation between Constructs**

Based on the results of Table 2, the squared root of AVE for each construct is greater than the value of the correlation between constructs in this study. Thus, constructs apply in this study have acceptable discriminant validity.

Table 3 shows factor analysis test results to prove the validity of each construct and dimension. Also to avoid the possible presence of common method variance bias among constructs.



	Component							
	1	2	3	4	5	6	7	8
T1	.636							
T2	.673							
T3	.841							
T4	.814							
REL3								.755
REL4								.755
RESP1		.748						
RESP2		.827						
RESP3		.642						
RESP4		.661						
ASS2					.826			
ASS3					.805			
ASS4					.624			
EMP1						.788		
EMP2						.775		
EMP3						.791		
EMP4						.817		
KEP1			.601					
KEP2			.694					
KEP3			.798					
KEP4			.705					
TR1				.900				
TR2				.923				
TR3				.877				
TR4				.862				
M1							.703	
M2							.701	
M3							.763	
M4							.758	

**Table 3: Result of Discriminant Analysis Using Factor Analysis - Rotated Component Matrix**

*Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization; Rotation converged in 7 iterations.*

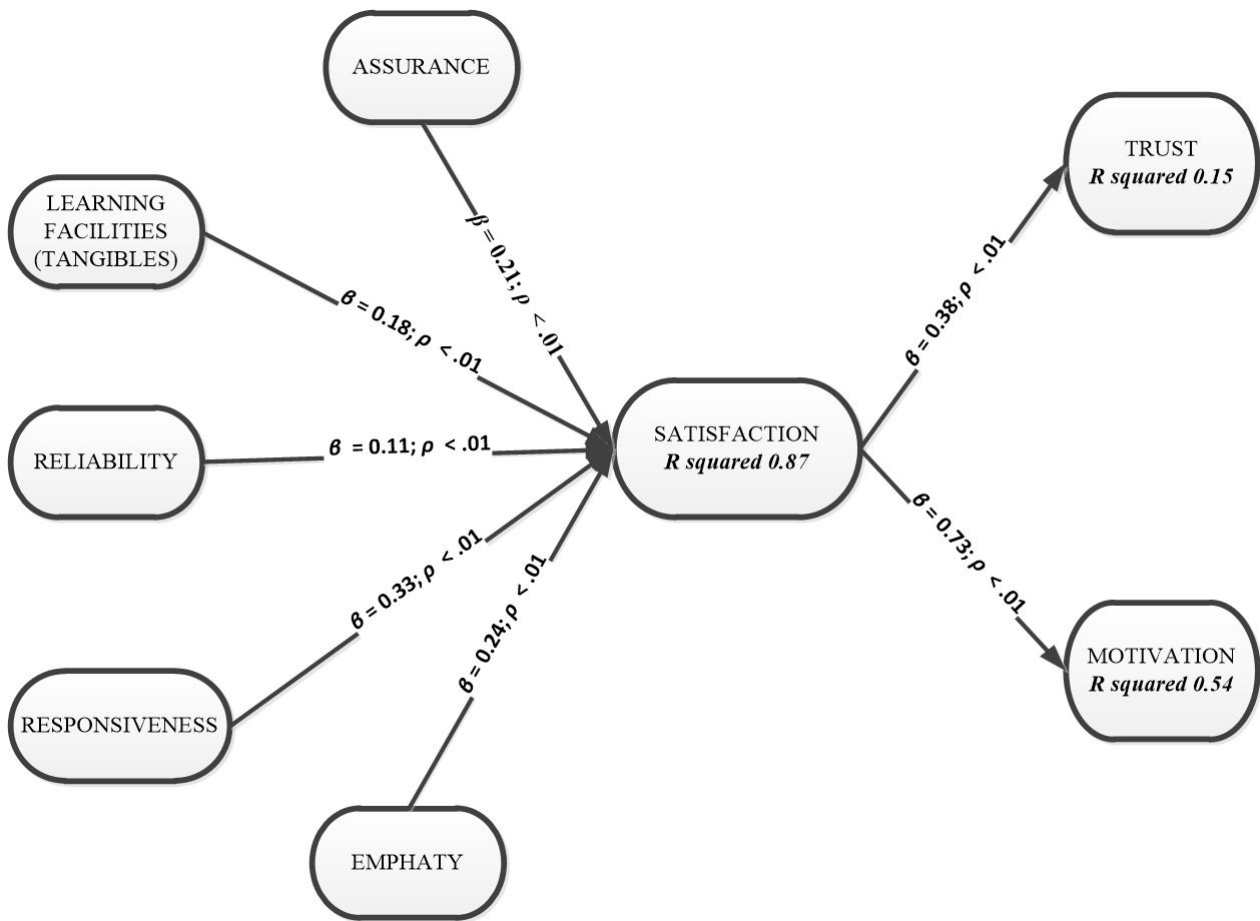
Table 3 provides the result of discriminant analysis using factor analysis, which shows that each construct is gathering following the measured construct. In other words, each indicator from a construct is appropriately separated from other construct indicators.

### Structural Model Testing

Structural model testing in this study is performed with Structural Equation Modeling (SEM) to test the validity of the research model along with hypotheses proposed with the help of Warp PLS 6 software. The test results are as follows:

Hypotheses	Coefficient	t value	Conclusion
H1	0.18	5.52	failure to reject H <sub>0</sub>
H2	0.11	4.16	failure to reject H <sub>0</sub>
H3	0.33	8.17	failure to reject H <sub>0</sub>
H4	0.21	6.01	failure to reject H <sub>0</sub>
H5	0.24	6.33	failure to reject H <sub>0</sub>
H6	0.38	8.22	failure to reject H <sub>0</sub>
H7	0.73	9.12	failure to reject H <sub>0</sub>

**Table 4: Parameter Structural Estimation**



**Figure 2: Structural Equation Model with the parameter estimate**

Based on Figure 2 and Table 4, the effect of service quality dimensions (tangible, reliability, responsiveness, empathy, assurance) toward participants' satisfaction are significantly positive, as well as their effect toward trust and motivation (Table 4 shows the value of  $t > 1.96$ , significant at  $p < 0.001$ ). Furthermore, Figure 2 and Table 5 conclude that participants'

satisfaction is explained by 87% by service quality. Also, participants' satisfaction explains 15% trust and 54% motivation.

Generally, the research model in this study has an appropriate Goodness of Fit (GoF) index as seen from the output given by the Warp PLS 6 regarding model fit and quality indices.

Average path coefficient (APC)=0.295, $p < 0.001$
Average R-squared (ARS)=0.419, $p < 0.001$
Average adjusted R-squared (AARS)=0.417, $p < 0.001$
Average block VIF (AVIF)=2.048, acceptable if $\leq 5$ , ideally $\leq 3.3$
Average full collinearity VIF (AFVIF)=2.565, acceptable if $\leq 5$ , ideally $\leq 3.3$
Tenenhaus GoF (GoF)=0.495, small $\geq 0.1$ , medium $\geq 0.25$ , large $\geq 0.36$
Sympton's paradox ratio (SPR)=1.000, acceptable if $\geq 0.7$ , ideally = 1
R-squared contribution ratio (RSCR)=1.000, acceptable if $\geq 0.9$ , ideally = 1
Statistical suppression ratio (SSR)=1.000, acceptable if $\geq 0.7$
Nonlinear bivariate causality direction ratio (NLBCDR)=0.857, acceptable if $\geq 0.7$

**Table 5: Model fit dan quality indices**

Based on the output in Table 5, this study model conforms to the data. The latent variables in this research model do not experience multicollinearity problems. Furthermore, the relationship between latent variables as stated in the research hypotheses is free from Simpson's paradox and the contribution of negative R-squared, which usually occurs

together with Simpson's paradox. Table 5 also shows that this research model does not experience causality problems. In other words, the relationship between variables hypothesized, along with the resulting coefficient value, is acceptable. Thus, overall, this research model has an appropriate GoF.

## DISCUSSION

The Result of structural parameter estimation using variance-based SEM, with the help of Warp PLS 6, fails to reject Hypothesis 1 (H1), which states that service quality of HR Development Board province intangibles aspect (learning facilities) has a positive effect on the trainees' satisfaction. This result is consistent with Choudhury (2014), which states that Tangible is real evidence of care and attention given by service providers to their consumers. This tangibles dimension will increase the positive image of service providers, especially for consumers, when evaluating service quality (Choudhury, 2014). The leadership education and training participants of echelon 3 and 4 experience a high service quality provided by the HRDBP in Indonesia through the tangible aspect. In this regard, an excellent physical appearance of buildings, study room equipment, learning structure, and completeness of books available in the library of HRDBP are capable of providing satisfaction to participants' of education and training programs.

Furthermore, Hypothesis 2 states that the service quality of HR Development Board in Indonesia from the aspect of reliability has a positive effect on the participants' satisfaction of leadership education, and training is supported. In line with Parasuraman, Zeithaml and Berry (1985); and Budiyantri and Patiro (2018), who find evidence that reliability is the company's ability to carry out services as promised promptly. The importance of this dimension implies that customer satisfaction will decrease if the services provided are not as promised by service providers. Thus, component or element of reliability dimensions is the agency's ability to deliver services properly and charge costs appropriately. In this regard, the reliability aspects of the HRDBP in Indonesia are their ability to assist education and training participants' problems and provide timely services which capable of delivering satisfaction for leadership education and training participants.

Moreover, hypothesis 3 states that the service quality of HRDBP in the responsiveness aspect has a positive effect on the participant's satisfaction is supported. Choudhury (2014) and Kloutsiniotis and Mihail (2018) state that responsiveness is the company's ability, which relates directly to their employees' capability in providing service in a timely and responsive manner. Responsiveness may foster a positive perception of the service quality provided. If there is a failure or delay in the delivery of services, the service provider will mend or minimize consumer losses immediately. This dimension emphasizes on attention and speed of employees in providing respond toward consumer requests, statements and complaints.

Hypothesis 4 states that the service quality of HRDBP in the assurance aspect has a positive effect on participant's satisfaction is supported. According to Kassim and Abdullah (2010) and Fatima and Razzaque (2014), assurance or collateral is employee's knowledge and behavior to build consumer's trust and confidence in consuming the offered services. This dimension is crucial because it involves consumer perceptions towards the risk of high uncertainty concerning the ability of service providers. When HRDBP

in Indonesia is able to provide assurance to education and training participants in terms of giving comfort, striving for active participation among participants, and the ability of trusted employees will affect participants' satisfaction.

Hypothesis 5 states that the service quality of HR Development Board Province in Indonesia from the empathy aspect has a positive effect on participant's satisfaction is supported. Ng, David, and Dagger (2011) and Choudhury (2014) conclude that Empathy is a company's ability that relates directly to their employees' ability to pay close attention individually to consumers and sensitive to consumer needs. Thus, the component of this dimension is a combination of access, namely the ease of utilizing services offered by the company, communication which is the ability to give information to consumers or obtain input from consumers, and understanding which is an effort to know and understand the needs and desires of consumers.

The execution of leadership education and training requires sensitivity from the organizers in implementing learning activities as a form of service provided to education and training participants. The results of this study indicate that the empathy aspect of the service quality of HRDBP in terms of focused attention to participants, the ability to give personal attention, the ability to understand participants' needs individually, and the ability to build long-term relationships with participants can satisfy leadership education and training participants.

Hypothesis 6 states that participants' satisfaction in leadership training has a positive effect on their trust toward HRDBP in Indonesia is supported. The results of this study are in line with Kassim and Abdullah (2010), Saleem, Zahra and Yaseen (2017), and Kloutsiniotis and Mihail (2018), who find evidence that trust is a consequence out of customer satisfaction. Similarly, Farndale, Hope-Hailey, and Kelliher (2011) state that customer satisfaction will further shape customer retention, namely, trust. In line with Farndale, Hope-Hailey, and Kelliher (2011), Alfes, Shantz, and Truss (2012) state that customer satisfaction can shape customer trust to maintain the sustainability of long-term relationship between the company and customers.

Hypothesis 7 states that participant's satisfaction in the leadership training had a positive effect on their motivation is supported. The result of this study confirms the findings of Ahmed et al. (2010), who find evidence that service quality affects satisfaction and motivation for students, as argued by Subrahmanyam (2017) that reciprocal relationship between affairs, processes, and other tasks related to the academic field can increase learning motivation. In line with Subrahmanyam (2017), Di Serio, Ibáñez, and Kloos (2013), in their research also show that satisfaction towards environmental conditions, learning facilities, and teachers' abilities are factors that shape students motivation to learn. In this study, HRDBP in Indonesia with excellent environmental conditions, learning equipment, acceptable classroom conditions, as well as high competence of facilitators will deliver the satisfaction to leadership education and training participants, which in turn increases their motivation to learn.

When exerting leadership education and training programs,

participants' satisfaction becomes a crucial factor in maintaining proper relations with participants, especially with their origin institutions. The formation of participants' satisfaction from service quality will establish trust, which drives an excellent image of the HRDBP in Indonesia.

HRDBP in Indonesia must pay close attention to factors that establish service quality due to their ability to affect satisfaction, which will impact participants' trust and motivation. Furthermore, with the existence of satisfaction, trust, and motivation of participants', the reputation of the agency/institution who organized leadership education and training programs will improve. Service quality is strategically crucial due to its ability in establishing satisfaction, trust, and motivation of participants, which will impact their achievement during the education and training process. Thus, HRDBP in Indonesia will foster an excellent image in the eyes of other regional government organizations, which will be contented to send their employees to participate in the education and training program held by this HRDBP.

The results of this study are different from Zeithaml, Parasuraman, and Berry (1990) and Lovelock and Wright (2002) where they conclude that reliability is the most important factor for customers when evaluating service quality. On the other hand, the results of this study conclude that responsiveness is one of the most important factors in influencing leadership education and training of echelon 3 and 4 participants' satisfaction at HRDBP in Indonesia. Thus, HRDBP in Indonesia obliges to pay close attention to responsiveness due to its direct relation with the customer's feeling when the service encounter occurs. Moreover, other service quality aspects (tangible, reliability, empathy, and assurance) complement the responsiveness aspect in forming the service quality of HRDBP in Indonesia.

## CONCLUSION

Generally, the results of this study indicate that aspect of service quality with a higher effect toward participants' satisfaction of leadership education and training is responsiveness. Based on the testing result, responsiveness variable has the highest path coefficient value, 0.33, compared to other variables of service quality. With this regard, HRDBP in Indonesia manages to provide satisfactory responsiveness to serve leadership education and training participants' needs, willing to make efforts for resolving problems faced by participants, responsive to training participants' requests, and willing to accept criticism and suggestions from participants. Therefore, leadership education and training participants' satisfaction is well established when HRDBP in Indonesia performs excellent responsiveness during leadership education and training process.

Regarding participants' trust, their positive attitude is

formed after experiencing satisfactory services provided by the HRDBP, which in turn will shape their trust toward the education and training agency/organization. This study also shows that skills, care, and honesty of all elements in HRDBP in Indonesia are factors that shape the trust of education and training participants toward institutions as training providers. Participants' satisfaction formed from an excellent service quality provided by the agency/institution as a service provider will shape their trust toward the institution. Thus, participants' trust represents an excellent image of the HRDBP as the agency/institution who exert leadership education and training program.

In terms of participants' motivation, service quality has an indirect influence on motivation through satisfaction. The results of this study show that service quality has a positive effect on participants' satisfaction, which in turn has a potential impact on their motivation. Thus, service quality and satisfaction play a significant role in participants' motivation. One of the major contributions of this study is the adoption of a more comprehensive approach to investigating determinants of trust and motivation compared to previous studies. The literature on the relationships between service quality, satisfaction, trust, and learning motivation is pervasive, but only a few are available in terms of training and development. Thus, this study has a wider coverage of the key dimensions of service quality and their impact on satisfaction, trust, and motivation in training and development on government institution settings.

## LIMITATION AND SUGGESTION

This study has several limitations. The first limitation is the selection of respondents, where respondents are only from participants of leadership education and training of echelons 3 and 4. Further research is expected to involve other education and training participants with a different program such as basic leadership training and other technical training programs. Second, this study involved only HRDBP in five provinces in Indonesia. Hence, it is necessary to widen the study area, which includes other provinces in Indonesia to generalize the study results.

Moreover, since this study is considered as the first to investigate the path of service quality to satisfaction, trust and learning motivation at the level of constructs, drawing from DKI Jakarta, South Sulawesi, North Sumatera, East Java, and Central Sulawesi HRDBP perspectives, further research concerning more comprehensive analysis is needed. Comparative studies with other HRDBP in Indonesia is also needed to identify the different effect of service quality dimensions in different provinces, and its effect on satisfaction, trust, and learning motivation. Moreover, the role of cultural issues may be investigated to add further depth to the current model.

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