

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman

Edison Guntur Aritonang; Bambang Shergi Laksmono; Ety Rahayu

University of Indonesia, Indonesia

E-mail: E-Mail: edison.guntur81@ui.ac.id

http://dx.doi.org/10.47814/ijssrr.v7i8.2203

Abstract

Education is one of the important keys in human development. In this regard, the evaluation on the fulfillment of national standards and technical standards for minimum educational services refers to the objectives of the implementation of the education system. Some evaluation studies that have been carried out by the government and other studies related to education tend to be on the phase of a system (input – process – output). Hence, through the study the researchers would like to focus at the process stage in the implementation of the education system at the basic education level. The instrument developed to measure the level of readiness for the implementation of the basic education system is used as the variable Y. The value of the Y variable is obtained from the integration on the development of 7 basic variables from the ISO 21001:2018 Standard with SNP and STPMP which must be fulfilled by the Regency/City Level II Government. The obstacles faced by the Regency/City Level II Government in meeting the Technical Standards for Minimum Education Services are turned into variables X. Variables X and Y are modeled with a cartesian diagram to capture the level of resilience in the implementation of the basic education service system. The findings of the research using the mixed method at the Regency of Sleman show that the Regency is still in the safe zone of the educational field diagram analysis model which has developed based on the Cartesian diagram. These findings thus imply that the Regency of Sleman Government is able to meet the Technical Standards for Minimum Basic Education Services with the category "Highly Feasible" and zero obstacle has interfered/hindered the implementation of the basic education system because the Standards are still at the Minimum level.

Keywords: Education System; National Education Standards; Minimum Education Service Technical Standards; Institution Capacity; Regency Government; Government Budget; Human Development; System Evaluation; Program Evaluation

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 205



1. Introduction

Education can be viewed as a system consisting of input, process, and output. As a process, education can be monitored and evaluated based on the objectives and also laws and regulations that bind its administration within a country. With regards to the statement, the education administration in Indonesia, which refers to the Law Number 20 of 2003 Regarding the National Education and the references related to the minimum criteria for the education system in all jurisdictions of the Unitary State of the Republic of Indonesia, has been stipulated in Government Regulation Number 57 of 2021 Regarding the National Education Standards or often referred to as PP 57/2021.

PP 57/2021 sets eight standards as the minimum criteria that must be met and these criteria include the following: graduation competency standards, content standards, process standards, educational assessment standards, education personnel standards, facilities and infrastructure standards, management standards, and financing standards. These standards are used as a reference in curriculum development and education implementation in order to achieve the national education goals. Therefore, in evaluating the fulfillment of the National Education Standards (NES), the fulfillment can be seen as a form of evaluation at the process stage in the implementation of an education system if it refers to system theory (*input – process – output*).

Human resources development through the education sector is one of the factors. Adioetomo (2018:213) emphasized that the main requirement to be able to reap the demographic bonus is that workers must be healthy, intelligent, and productive when viewed from the worker's side. Human development can thus be seen as a form of welfare development so that every individual can be expected to meet the needs of their economic and social aspects. Midgley in Adi (2015:23) defines social welfare as the state or condition of human life that is created when various social problems can be managed properly, when human needs can be met, or when social opportunities can be maximized. Thus, education is one of the important factors in the process of human development or social welfare development; therefore, the process of fulfilling the NES is one of the decisive keys. The responsibility for managing the basic education system (Early Childhood Education, Elementary School, and Junior High School) based on the Regulation of the Minister of Education, Culture, Research and Technology No. 32/2018 is the responsibility of the Level II Regency/City Level Government, except for the Province of Jakarta Special Capitol.

Several studies and researches that have been previously conducted focus on the process in the implementation of an education system. However, these studies and researches are still partial, meaning that they only answer one or two variables from the National Education Standards (NES) and the Educational Minimum Service Technical Standards (EMSTS). A study conducted by Waluyo (2010) using panel data from 1998 to 2007 focused more on the aspect of financial standards and the findings in his state stated that government spending in the education and health sectors has positive influence on human development by 37.9% and influence on reducing poverty rates by 17.3%. The research is similar but adds economic growth variables conducted by Setyawati (2013) which adds economic growth variables.

Other research is still partial in the process stage, be it both quantitative and qualitative research, on more specific loci related to human development. With regards to the statement, there is a positive influence on government expenditure variables in Mandailing Natal Regency by Muharram (2014), in Banten Province by Maulana (2013) with panel data from 2002 to 2011, in Bengkulu Province by Amilda (2014) with panel data from 2007 to 2012, in South Sulawesi Province by Sabir (2015) with panel data from 2008 to 2013, and provinces on the island of Sumatra by Setiawati (2013) with panel data from 2006 to 2010.

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 206



There are also several other evaluation studies that take the theme of education but focus on the output stage. For example, a study by Fedri (2014) looks at the influence of the Operational School Fund transfer variable, the Public Health Security variable, and the Community Empowerment National Program variable on human development with panel data from 2008 to 2010 in 33 provinces in Indonesia found that the effect of Operational School Fund transfer has been positive and significant on the increase in the Literacy Rate (LR) and the Average Length of School (ALS) while the Sector Budget Education has no significant effect. Furthermore, the transfer of Public Health Security funds has positive and significant effect. The Statistics Indonesia has also referred to the output stage pertaining to education through the variables of Including the Central Statistics Agency, it also refers to output stats related to education through LR and ALS variables.

However, the gap in the readiness of education from one city/regency to another is still high, especially in the cities that serve as the provincial capitals compared to the other regencies in the provinces located inside and outside Java. Despite the gap, the standards that have been used are the same, namely the National Education Standards (NES) and the Technical Standards for Minimum Education Services (TSMES) which are contained in Government Regulation of the Republic of Indonesia Number 4 of 2022 concerning Amendments to Government Regulation Number 57 of 2021 concerning National Education Standards. Law 20/2003 on the National Education System, Law 14/2005 on Teachers and Lecturers, and Law 12/2012 on Higher Education are also common references in the implementation of education in districts/cities.

Several education evaluation studies abroad are also conducted in line with the context of this research. One of these studies is the research conducted by Turnbull et.al. (2019) on *Critical Studies in Education, Faculty of Education and Social Work, University of Auckland*, but still based on *output statistics*. This study found that there is a significant trend of gender differences that occur in the field of Science, Technology, Engineering, and Mathematics (STEM) education at a university. The study related to preferences in STEM fields combines a network analysis of student enrollment data from the perspective of Pierre Bourdieu's sociological theory. To measure Bourdieu's concept of "arena", around 9000 students were used (panel data 2009 to 2014).

Another study with the similar context has been conducted in collaboration with the Massachusetts Institute of Technology – MIT. Specifically, this study by Israel et.al. (2018) is related to evaluation at the process stage that refers to the basic principles of equality and justice in educational services. Through this study, the researchers develop a mapping framework and display a space (division of mapping areas) of the depiction of the leveling of social justice. This framework refers to the theoretical conceptualization of Amartya Sen's "*capability*" and the "field" or arena, "capital", "form of capital", and "habitus" from the perspective of Pierre Bourdieu.

The study on the process stage related to educational evaluation conducted by Silaeva & Semenov (2018) has referred to the ISO 21001:2018 Standard to ensure education quality standards through the management system of educational organizations. The research conducted in Russia by Silaeva and Semenov offers an instrument based on the ISO 21001:2018 Standard to maintain the internal quality of an education system, even Silaeva & Semenov & Zvezdova (2019) developed the *frame work* in the creation of its algorithm system. The ISO 21001:2018 Standard was published on April 30th, 2018 by the International Organization for Standardization ISO which consists of management principles for the management of educational organizations in fulfilling the needs for the implementation, implementation, evaluation, and development of management systems in education (Silaeva & Semenov, 2018:71). At the same time, the Standard is in line with what has been set by BSN (2020) as a guideline for the implementation of the ISO 21001:2018 Standard.

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 207



The National Standardization Agency (BSN) through the Directorate of Standards and Conformity Assessment Implementation Reinforcement has set the relevant guidelines in Bahasa Indonesia on December 2020 and has also transformed the ISO 21001:2018 Standard into SNI ISO 21001:2018 (BSN, 2020). The integration of what has been determined into the NES and the TSMES in the SNI ISO 21001:2018 instrument format is the main theme of this study. This action has been taken in order to measure the level of readiness for the implementation of the basic education system in the Regency of Sleman. For information, the Regency of Sleman has been selected as the research locus is because the region has the highest Human Development Index (HDI) in Indonesia for the district administrative area category but the poverty rate is more than one digit as the sample criterion.

The population of the research analysis unit in the study is approximately 409 Education Offices that have direct authority over the management of basic education in Indonesia (except for the Province of Jakarta Special Region because the Office in this region is directly managed by the province). The research data were collected by a non-probability sampling model survey method with purposive sampling method. Each city/regency level region with Education Office in Indonesia certainly has a variety of capabilities and limitations in fulfilling NES and TSMES, including the Regency of Sleman.

The obstacles faced in the fulfillment of NES and TSMES are found in its own variables. Hence, there are 2 major variables in this study, namely the readiness to implement the education system based on NES and TSMES integrated into SNI ISO 21001:2018 and the obstacles faced in the fulfillment. The obstacles faced in the implementation of education in a region can be measured through the variables in the ISO 31000:2009 Standard related to Risk Management. The risks that should be managed are various obstacles in the implementation of education in areas that have not been solved in terms of input, process, and output. These obstacles can be found in the activities that deviate from the eleven basic principles referred to by ISO 31000 and they can take the form of vulnerabilities or threats that hinder the fulfillment of standards that have been set in the implementation of education in a region.

The description on the implementation of the education system in a region cannot be captured properly whether it is caused by the low level of ability of the region in fulfilling the standards that have been set or the obstacles faced by the region that are too large from other factors. These factors can be, for example, geographical conditions, political conditions, social conditions, cultural conditions, natural resources, or others. Several studies previously conducted not been able to provide an overview of this condition. Departing from this situation, the current study strives to model the readiness level and the obstacle level through an outline in one Cartesian diagram. Wholey in Shadis (1991) said that if there is a leak of definition then it has the potential to cause a gap in understanding, causing a leak of logic to occurs and impacting the leak of management. Therefore, through this study it is expected that an analysis can be carried out that defines the root of the problem whether it comes from the aspect of readiness level or the aspect of constraints.

2. Framework

The conceptual framework related to the institutional capacity of the Education Office which manages basic education in Indonesia at the Regency/City level based on the Regulation of the Minister of Education, Culture, Research and Technology No. 32/2018 concerning Minimum Education Service Technical Standards to implement basic education system (Early Childhood Education, Elementary School, and Junior High School) or nine years of basic education. The institutional capacity of the Education Office consists of two aspect. First aspect about the ability of implementation through the fulfillment of NES and TSMES that will be measured by the instruments which developed based on the seven variable in SNI ISO 21001:2018 as the level of readiness. Meanwhile, the second aspect about the

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 208



obstacles faced in fullfiling the minimum standards can be measured through the instruments that refer to the guidelines in ISO 31000.

The instrument for measuring the readiness for education implementation through the fulfillment of NES and TSMES for basic education is built on 7 categories of variables contained in SNI ISO 21001:2018. These variables are namely: (1) organizational context; (2) leadership; (3) planning; (4) support; (5) operation; (6) performance evaluation; and (7) improvement. The variables of organizational context were developed into 21 question instruments, leadership into 16 instruments, planning into 15 instruments, support into 56 instruments, operation into 90 instruments, performance evaluation into 13 instruments, and improvement into 9 instruments. Thus, in order to measure the level of readiness for the implementation of basic education system in the Regency Sleman, approximately 220 instruments have been used. These instruments are designed in the form of limited answers with the score 2 if the instruments are met according to the standards that have been set, 1 if the instruments are partially fulfilled or have been implemented but have not been met according to the standards and 0 if the instruments have not been fulfilled at all.

There are four main steps that serve as a workflow in this evaluation study. These steps are shown in Figure 1 below and consist of: (1) filling in the data related to the capacity in the Office of Education the Regency of Sleman as the institution that has the authority to implement the basic education system starting from determining the needs of school development; (2) admitting new students; and (3) supervising and controlling the implementation of basic education by the relevant unit. The data related to the readiness to meet standards in the implementation of the basic education system is filled in online by the legitimate representatives and the data are used as initial data that will be validated in the assessment activities. Meanwhile, in relation to the data on the obstacles faced in meeting the standards, these data are filled in offline by means of worksheets that have been prepared.



Figure 1. Work Flow of Research Evaluation Source: Prepared by the authors

To measure the level of readiness for the implementation of the basic education system in this study, a web-based application has been developed. The web-based application has been developed in order to be completed by the representatives of the Education Office as these representatives have

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 209



legitimacy. Then, these representatives should later complete the pre-assessment or the online self-assessment activities as shown in Figure 2 below.

CAB KITA	these + Olinge
Name Anno Baspa	MONTOINING JAVABAN A SEAMER
A 101,0049 10041	
	#ISSNEDD REELAN EXCLOSE FORCES EXCLOSE AND AND A
a per contract of	NAME AND ADDRESS OF A DESCRIPTION OF A D
R com	ALL
	and 27 performant
(1 Maninetig	
R LOOD/F	REPORTS CONTINUES IN TRANSPORTS AND ADDRESS AND ADDRE
	When the to American
	property parallel
	 Otom traditions melabaten paalaren ja mederalega das terbaral terbalas salevah tegisten annetenggerana pendidiken Atomake horizaten horizaten pengilikarenti melapita certain sekenal pendidiken Atomake horizaten pengilikarenti melapita certain sekenal pendidiken Atomake horizaten pengilikarenti pengilikarenti melapita certain sekenal pendidiken Atomake horizaten pengilikarenti melapita certain sekenal pendidiken Atomake horizaten pengilikarenti pengilikarenti melapita penditi melapita pendidiken Atomake horizaten pengilikarenti pendidikan dengan standar makenal pendidiken Atomake horizaten pengilikarenti pendidikan dengan standar makenal pendidikan Atomake horizaten pengilikarenti pendidikan dengan standar makenal pendidikan
	🗄 🗇 bhai bhildhan nàislean iaidhaid, narhanng, dan naisart lehadar abird haglatar persebagga sa peolaltan B
	inducted: Organizati Parabilitian gong alberrap, 2004/feat
	 Ada daharen martaritettegi unalasid sadalkant
	 Tarkenin kegintan tanlahumentan deligan batt
	C / Adu, singe titele survivemental denger teek
	C Table Ads Pressen
	HTTERANDAN .
	and in a constant of a congress of a strend bidge.



The online data filling is in the form of pre-assessment or self-assessment activities and this aims at developing the initial data for a small web-based application as shown in Figure 2. The set of answers retrieved will be validated in the assessment activity as a second series of workflows where the researchers meet face-to-face with the informants through a Focus Group Discussion – FGD activity. The answer set is clarified and confronted if it is different from the data set that the researcher has collected.

Then, the third workflow is the processing of the measurement results. The results of measuring the level of readiness to implement the education system will be used as the Y variable with the highest score of 100%. Meanwhile, the obstacles faced in the implementation of the education system will be used as variable X with the highest score of 100%. There are 16 instruments that will be used in measuring the obstacles that are found from the aspect of the time period that still occurs in the last 5 years as shown in Table 1 below. The obstacles that will be dealt with may be more than 16 based on the declaration of the informant who has the legitimacy to deliver it or the results of clarification obtained from the open-source information that has been collected.

Last but not the least, the fourth workflow is mapping the results of readiness degree in the form of a percent number as the Y axis and a value of 100% minus the result of the degree of constraint in a field of the Cartesian diagram. The mapping position between the coordinate points of the X axis and the Y axis will be analyzed based on the division of fields based on the zone that has been determined on the scale of readiness level and the scale of constraints.

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 210



Table 1. Parameter Load of the Obstacles

Score	Parameter
1	Level of Readiness has never been measured or has been measured within the last five
	years in minimum.
2	Level of Readiness has been measured within the last three years in minimum.
3	Level of Readiness has been measured within the last year in minimum.
4	Level of Readiness has been measured within the last six months in minimum.
5	Level of Readiness has been measured within the last three months in minimum.

Source: Prepared by the authors

3. Method

The unit of analysis in this study refers to the Education Office which manages basic education in Indonesia at the Regency/City level based on the governing laws and regulations. Then, the research data is collected by means of the non-probability sampling method with the purposive sampling technique. This approach has been selected because the data are collected based on the instruments that have been developed and validated with the source triangulation technique. There are two major variables that have been employed namely the level of readiness for implementing the basic education system by the Education Office and the level of obstacles faced in fulfilling the NES and the TSMES.

3.1. The Readiness to Implement the Educational System (Y Variable)

The level of readiness to implement the education system is measured through seven categories of variables contained in SNI ISO 21001:2018. These variables are namely organizational context, leadership, planning, support, operation, performance evaluation, and improvement. All of these variables are given a maximum weight of 100%. The calculation result from each variable will be multiplied by the degree of importance of the seven variables as shown in Table 2 below. This decision has been made in order to be summed as the degree of readiness for the implementation of the education system.

Category of Variable According to SNI ISO 21001:2018	Load (%)	Number of Instrument
Organizational Context	5.77	21
Leadership, Commitment and Policy	21.83	16
Planning	8.65	15
Support	28.53	56
Operation	16.06	90
Performance Evaluation	10.65	13
Improvement	8.50	9

Table 2. Load of Impact per Variable of SNI ISO 21001:2018

Source: Prepared by the authors

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 211



The summation results of the seven variables are displayed in the level of readiness in Table 3 below. The level of readiness of a region in the implementation of the basic education system can be seen in the degree of each variable. By doing so, recommendations can be provided in order to strengthen the fulfillment of weak aspects and maintain the already good aspects.

	-
Readiness Level	Parameter (%)
Not Ready	Score < 65
Moderately Ready	65 <u><</u> Score < 75
Ready	75 <u><</u> Score < 85
Highly Ready	Score ≥ 85

Table 3. Level of Readiness for Education Implementation	Table 3. Level of Readiness for Ed	lucation Implementation
--	------------------------------------	-------------------------

Source: Prepared by the authors

3.2. Obstacles in the Implementation of Education System (X Variables)

Obstacles that refer to the weakness or the inability to meet the standards for the implementation of the basic education system have been found to remain a problem or weakness for the last five years. The results of the calculation for all obstacle instruments refer to Table 1 and the average value is calculated so that the level of constraint can be seen based on the threat and vulnerability level of the Prunckun (2014) version in Table 4 below. Referring to Prunckun (2014), the level of constraint that can be understood is that the value is not greater than two. Hence, if the scores converted in the form of a 100% scale, then the constraint value of more than 40% is still in the category that does not require immediate intervention. Therefore, the category is still "Minimum" or "Negligible" category.

6	
Obstacle Level	Score
Negligible	1
Minimum	2
Medium	3
High	4
Acute	5

TADIC T. DESIGE OF OUSLACIE	Table 4.	Degree	of	Obstacle
-----------------------------	----------	--------	----	----------

Source: Prepared by the authors

3.3. Diagram Field Model for the Implementation of Basic Education System

The analysis model is built based on a cartesian diagram with the Y Axis and the X Axis. The Y Axis refers to the achievement of the level of readiness in the implementation of the education system in the fulfillment of NES and TSMES which is integrated in the SNI variables ISO 21001:2018 with a maximum value weight of 100%. Meanwhile, the X Axis refers to the level of ability to reduce the

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 212



obstacles faced in fulfilling the NES and the TSMES. The mean score for the level of constraints that has been obtained will be converted into 100%. The conversion value will be a subtraction from one and used as the value of the X Axis. The reduction is made on the consideration that the constraint is negative and therefore it should be reduced. Hence, the value of the X Axis = 1 - the degree of constraint in the form of a percent. The fields processed on the mapping between the Y Axis and the X Axis can be seen in Table 5 and modeled as shown in Figure 3 below.

Field Category	Determination Level	Y and X Mapping	Color
Zone #1	Highly Determined	Highly Ready and Negligible	Dark Green
Zone #2 and Zone #3	Determined	Highly Ready and Minimum; Ready and Negligible	Light Green
Zone #4, Zone #5 and Zone#6	Moderately Determined	Highly Ready and Medium; Ready and Minimum; Moderately Ready and Negligible	Light Yellow
Zone #7, Zone #8, and Zone #9	Less Determined	Highly Ready and High; Ready and Medium; Moderately Ready and Medium	Dark Yellow
Zone #10	Not Determined	Highly Ready and Acute; Ready and High or Acute; Moderately Ready and Medium; Not Ready	Red

Tabel 5. Diagram Field Mapping for the Implementation of Basic Education	on
(SNI ISO 21001:2018 and Implementation Obstacle)	

Source: Prepared by the authors





X = 1 – obstacle degree



4.Results

The measurements carried out from June 2023 to August 2023 were related to the level of readiness for the Office of Education the Regency of Sleman to implement the basic education in the Regency of Sleman, the Province of Yogyakarta Special Region. The score of the implementation readiness in this regard is 94.54% from the highest scale of 100% and thus belongs to the "HIghly Ready" category. The results have been obtained from the summation of the multiplication results between the achievement value of the readiness level with the weight of each variable in SNI ISO 21001:2018. The multiplication results themselves have been measured through 220 question instruments as contained in Table 6 and modeled in Figure 4 below. The results show that each variable in SNI ISO 21001:2018 has been fulfilled by the Office of Education the Regency of Sleman through the fulfillment of NES and TSMES which are outlined in the form of question instruments. Meanwhile, the achievement that needs to be improved is found in Improvement because this variable differs from the achievement in other variables, namely 86.53%.

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 214



Table 6. Measurement Results for the Readiness to Implement the Basic Education In the Regency of Sleman

Stellar						
Category of SNI ISO 21001:2018 Variable	Achievement (%)	Level of Readiness	Variable Load	Multiplication Results		
Organizational Context	92.36	Sangat Siap	5.77	5.329		
Leadership, Commitment and Policy	97.01	Sangat Siap	21.83	21.181		
Planning	97.75	Sangat Siap	8.65	8.458		
Support	95.85	Sangat Siap	28.53	27.351		
Operation	91.25	Sangat Siap	16.06	14.652		
Performance Evaluation	95.90	Sangat Siap	10.65	10.212		
Improvement	86.53	Sangat Siap	8.50	7.359		
% Final Achievement (Degree of Readiness)				94.542		

Source: Prepared by the authors





A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 215



The measurement results for the obstacles faced by the Office of Education the Regency of Sleman are 1.88 in average or belong to the "Minimum" category referring to Table 4. There are obstacles related to the teacher certification process in all schools with regards to the basic education category. This certification has not been able to exceed the tolerance threshold of 75.00%. In addition, there has also been no construction or addition of new schools for the last five years whereas the increase in the population has been positive from year to year. Another obstacle that has still been found in the last year is the salaries or wages for Education Personnel and Honorary Teachers that have been under the Regional Minimum Wage (UMP).

The mapping on the measurement results for the level of readiness to implement the education system in the Regency of Sleman and the level of obstacles faced in a diagram field analysis model based on a Cartesian diagram has been conducted. The mapping results have thus ben obtained in the field of Zone #2 as shown in Figure 5 below.



X = 1 – obstacle degree



Zone #2 is the result of mapping between the "Highly Ready" category and the level of "Minimum" category (it has the potential to cause the function not to run optimally even though it does not require immediate intervention). Therefore, the efforts to mitigate obstacles are needed to shift the entry position to Zone #1. Thus, it can be said that the implementation of the basic education system in the fulfillment of SNP and STPMP basic education carried out by the Office of Education the Regency of Sleman is in the "Highly Ready" category. However, the obstacles with regards to the given context belong to the "Medium" category. If the Office of Education the Regency of Sleman does not mitigate the

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 216



existing obstacles, then the obstacles potentially shift to the field of Zone #4 or if the level of readiness decreases then the obstacles have the potential to enter the field of Zone #5.

5. Discussion

The findings in this study provide a direction to reinforce the readiness to implement the basic education system or to mitigate the given obstacles. What Waluyo (2010), Setyawati (2013), Maulana (2013), Muharram (2014), Amilda (2014), Fedri (2014), and Sabir (2015) have studied do not capture the obstacles faced in the implementation of an education system even though some of these studies have taken pictures at the stage of the process. Even the study conducted by Turnbull et.al. (2019) has not been able to answer the obstacles that cause the significant trend of gender differences that occur in the science, technology, engineering, and mathematics (STEM) education arena at university.

However, the research conducted by Silaeva & Semenov & Zvezdova (2019) in the framework development for the context of maintaining the internal quality of education through the ISO 21001:2018 Standard provides *insight* to develop a method to measure the level of readiness. This is necessary for the implementation of the basic education system in the Regency of Sleman through the fulfillment of ENS and TSMES which have been stipulated through the governing laws and regulations. Of course, in the practice the fulfillment of these standards has a variety of different obstacles from on city/regency to another.

The obstacles in fulfilling the education standards that have been set are very important to be studied. The study becomes more important especially for the Level II Regional Governments with regional autonomy system and the fulfillment of the minimum 20% education budget allocation from the Regional Revenue and Expenditure Budget (APBD) in Indonesia. This has been made into one of the constitutional standards; unfortunately, there is no sanction for regional heads if they do not fulfill these standards even though these standards are very closely related to the aspects of leadership, commitment, and policy assessed in SNI ISO 21001:2018 with an important weight of 21.83%. The importance of meeting these standards is in line with research conducted by: (1) Lubis (2015) pertaining to the influence of Regional Revenue and Expenditure Budget (PAD, DAU, DAK, DBH) in 33 provinces throughout Indonesia on HDI with panel data from 2002 to 2012; (2) Hermanto (2015) pertaining to the influence of Regional Revenue and Expenditure Budget realization, regional fiscal independence, economic growth and local government size on HDI with a random effects regression model through the Eviews 9 application; (3) Setyarso (2014) pertaining to the Influence of Regional Revenue and Expenditure Budget and Household Consumption at the provincial level in the education and health sector on HDI with panel data from 2008 to 2011; (4) Fedri (2014) pertaining to the effect of fund transfer from JAMKESMAS and PNPM superordinate against HDI with a regression model using panel data throughout 33 provinces from 2008 to 2010; (5) Maulana (2013) pertaining to the Influence of the Banten Regional Budget from 2002 to 2011 on economic growth and HDI using the econometric model method of panel data; (6) Amilda (2014) related to the Influence of the Regional Revenue and Expenditure Budget on the education and health sector in Bengkulu Province with the panel data from 2007 to 2012 on HDI (through RLS, AHH, and GDP per capita indicators); and (7) Waluyo (2010) pertaining to the Influence of Regional Revenue and Expenditure Budget on the education and health sector on HDI and poverty reduction with biennial data population from 1998 to 2007.

The evaluation studies that have been previously mentioned, especially in the education sector, tend to see the impact of the standards fulfillment on human development from the education sector. Specifically, these standards fulfillment is viewed from the perspective of the average school period without looking at other factors that might affect it such as organizational context, planning, support, operations, performance evaluation, and improvement as captured by SNI ISO 21001:2018.

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 217



Therefore, it is expected that a more comprehensive description of the level of readiness and the obstacles that have been faced can provide a better picture so that the leak of definition conveyed by Wholey in Shadis (1991) does not have the potential to cause a leak of logic that results in the occurrence of a leak of management within the basic education system in the Regency of Sleman. If this field analysis model of the basic education system implementation diagram can identify what is weak and needs to be improved, then the intelligence workers as expected by Adioetomo (2018) have a greater chance to succeed.

Conclusions

This study offers a cartesian diagram-based analysis model divided into fields for mapping the level of readiness in the implementation of the basic education system integrated through SNI ISO 21001:2018 and the National Education Standard (NES) and the Technical Standard for Minimum Education Services (TSMES) with the level of obstacles that exist in the fulfillment of these standards. There are ten fields that can be used to analyze the implementation of the basic education system organized by the Regency/City Level Education Office to see if the degree of readiness photographed is included in the category of Not Ready/Moderately Ready/Ready/Highly Ready and the degree of obstacles that has been captured is included in the category of Negligible/Minimum/Medium/High/Acute.

The field-based analysis has been able to provide an overview of recommendations on whether a system of basic education implementation that has been captured requires the reinforcement on the level of readiness or sufficiently maintaining it or not. However, efforts are still needed to reduce the existing obstacles. The system for implementing the basic education at the research locus in the Regency of Sleman already belongs to the "Highly Ready" category. Despite that, there are quite a few obstacles leads to the "Medium" category. Therefore, an intervention is needed in the form of policies, strategies, and efforts to reduce obstacles so that the results in the Zone #2 field are in the direction of the Zone #1 field. Zone #1 describes the most ideal situation of the results of the implementation of the basic education system since the level of readiness has fallen under the category "Highly Ready" and the obstacle has fallen under the "Negligible" category.

Limitation

The determination of the sample in the study makes use of a non-probability sampling method with the purposive sampling technique. The samples are collected form the Office of Education the Regency of Sleman, the Province of Yogyakarta Special Region, Indonesia. The Office of Education the Regency of Sleman has been selected since the Office is an institution that provides basic education based on the governing laws and regulations.

The information that has been obtained describes how the implementation of the basic education system (Early Childhood Education, Elementary School, and Junior High School) that takes place in the Regency of Sleman. The description itself has been provided in relation to the fulfillment of the National Education Standards (SNP) and the Technical Standards for Minimum Education Services and the obstacles faced related to the fulfillment of these standards.

Ethics Statement

This research has been approved by the Ethics Commission of the Department of Social Welfare Sciences, FISIP UI. Respondents involved in this research have expressed their consent stated at the beginning of the research evaluation. All authors have expressed willingness for publication of this manuscript.

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 218



References

- Adi, Isbandi Rukminto. 2015. Kesejahteraan Sosial: Pekerjaan Sosial, Pembangunan Sosial, dan Kajian Pembangunan. Cetakan ke-2. Jakarta: PT. RajaGrafindo Persada.
- Amilda, Teni. 2014. Pengaruh belanja daerah di bidang pendidikan dan kesehatan terhadap komponen indeks pembangunan manusia di Provinsi Bengkulu tahun 2007 – 2012. Pascasarjana Magister Perencanaan dan Kebijakan Publik. Universitas Indonesia. Depok.
- BSN. 2020. Panduan Penerapan SNI ISO 21001:2018 Sistem Manajemen Organisasi Pendidikan.
- Febriyantoro. 2016. Pengembangan model pembangunan manusia dalam komunitas nelayan tangkap tradisional (Kasus: Pulau Tunda indonesia). Pascasarjana Ilmu Lingkungan. Universitas Indonesia. Depok.
- Fedri, Rikola. 2014. Pengaruh transfer dana bos jamkesmas dan pnpm terhadap pencapaian indeks pembangunan manusia ipm model regresi data panel 33 provinsi tahun 2008 2010. Pascasarjana Magister Perencanaan dan Kebijakan Publik. Universitas Indonesia. Depok.
- Hermanto, Asep Agus. 2015. Analisis pengaruh realisasi APBD, tingkat kemandirian fiskal daerah, pertumbuhan ekonomi dan ukuran pemerintah daerah terhadap indeks pembangunan manusia di Indonesia. Pasca Sarjana Ilmu Akutansi. Universitas Indonesia. Depok.
- Iatridis, Demetrius. 1994. Social Policy: Institutional Context of Social Development and Human Services. California: Brooks/ Cole Publishing Company.
- Lubis, Ika Hardina. 2015. Anggaran pemerintah dan pembangunan manusia di Indonesia studi kasus pada tingkat provinsi di Indonesia. Pasca Sarjana Ilmu Ekonomi. Universitas Indonesia. Depok.
- Lubis, Mhd. Yasir. 2014. Pengaruh belanja pemerintah daerah untuk bidang pendidikan terhadap pembangunan manusia di era desentralisasi. Pascasarjana Magister Perencanaan dan Kebijakan Publik. UniversitasIndonesia. Depok.
- Maulana, Husin. 2013. Analisis kontribusi pengeluaran pemerintah daerah terhadap pertumbuhan ekonomi dan pembangunan manusia di Provinsi Banten, tahun 2002-2011. Pasca Sarjana Ilmu Ekonomi. Universitas Indonesia. Depok.
- Merkuryev, Yuri. & Merkuryeva, Galina. & Piera, Miquel Àngel. & Guasch, Antoni. 2009. Simulation-Based Case Studies in Logistics: Education and Applied Research. USA: Springer.
- Midgley, James. 1995. Social Development: The Developmental Perspective In Social Welfare. London: SAGE Publication Ltd.
- Muharram. 2014. Upaya pemerintah daerah dalam meningkatkan indeks pembangunan manusia di Kabupaten Mandailing Natal. Program Pascasarjana Kajian Ketahanan Nasional. Universitas Indonesia. Depok.
- Pourdehnad, John. & Wexler, Erica R. & Wilson, Dennis V. 2011. Systems and Design Thinking: A Conceptual Framework for Their Integration. Organizational Dynamics Working Papers, Vol. 10, No.11-03. University of Pennsylvania.

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 219



- Prunckun, Hank. 2014. Scientific Methods of Inquiry for Intelligence Analysis. US: Rowman & Littlefield.
- Robinson, James A. & Acemoglu, Daron. 2012. Why Nations Fail: The Origins of Power, Properity and Poverty. New York: Crown Business.
- Setiawati, Isti Budhi. 2013. Hubungan antara pertumbuhan ekonomi dan pembangunan manusia di Pulau Sumatera. Program Pascasarjana Ilmu Ekonomi. Universitas Indonesia. Depok.
- Setyarso, Rakhmad. 2014. Pengaruh pengeluaran pemerintah daerah dan masyarakat di bidang pendidikan dan kesehatan terhadap pembangunan manusia di Indonesia. Pasca Sarjana Ilmu Ekonomi. Universitas Indonesia. Depok.
- Shadish, Willam R. & Cook, Thomas D. & Leviton, Laura C. 1991. *Foundations of Program Evaluation: Theories of Practice*. London: SAGE Publications, Ltd.
- Silaeva, Vera V. & Semenov, Viktor P. 2018. Internal Education Quality Assurance through Standardization of Education Organization Management System. IEEE International Conference "Quality Management, Transport and Information Security, Information Technologies", pp. 70-73. IEEE. https://doi.org/10.1109/ITMQIS.2018.8525083.
- Sjafari, Agus. 2014. Kemiskinan dan Pemberdayaan Kelompok. Yogyakarta: Graha Ilmu.
- Taylor, Marilyn. & Guerre, Don de. & Gavin, James. & Kass, Raye. 2002. Graduate Leadership Education for Dynamic Human Systems. Management Learning, Vol. 33, No. 3, pp. 349-369. SAGE Publication.
- Torrens. 2012. Developing a model and tool to measure community dissaster resilience. Torrens Resilience Institute. Australia: www.torrensresilience.org.
- Waluyo, Agung. 2010. Pengaruh pengeluaran pemerintah sektor pendidikan dan kesehatan terhadap peningkatan pembangunan manusia dan pengurangan kemiskinan. Pasca Sarjana Ilmu Akutansi. Universitas Indonesia. Depok.

Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).

A Model for Institutional Capacity Analysis for Education Sector at Regency Level in Indonesia: A Case Study on the Office of Education the Regency of Sleman 220