Implementation of Internal Quality Assurance System (IQAS) for Senior High School in Palu, Indonesia

Gian Ambado[1], Muhammad Nur Ali[2], Golar[3], Afadil[4], Sitti Chaeriah Ahsan[5]

[1]Social Science Study Program, Graduate Program, Tadulako University, City of Palu, Indonesia

[2,5]Faculty of Social Science and Political Science, Tadulako University, City of Palu, Indonesia

[3]Faculty of Forestry, Tadulako University, City of Palu, Indonesia

[4]Faculty of Teacher Training and Education, Tadulako University, City of Palu, Indonesia

[1]gianambadi@yahoo.com

ABSTRACT

This study aims to identify the Internal Quality Assurance System (IQAS) implementation and determine the implementation factors, also the most dominant factors to offer strategies for improving the implementation of internal quality assurance system. This study used a quantitative approach with ex post facto study. The study location was conducted in senior high school in Palu. Data collection techniques used were questionnaire, documentation, and interview to know the relevance of answers given by questionnaire and documentation. The data analysis used confirmatory factor analysis (CFA) and analytic hierarchy process (AHP). The results showed that the implementation of IQAS for high school level in Palu was still low based on the factors affecting the implementation, namely 19.29% of content, 13.85% of context, 14.02% of resources, 13.59% of communication and 9.90% of socio-economic environment political. Moreover, the most dominant factor in implementation is content of 19.29%. The IQAS implementation strategy that will be conducted is IQAS technical guidance, mentoring, monitoring and stimulus fund.

Keywords

Implementation, Internal Quality Assurance System (IQAS), Strategy.

Article Received: 10 August 2020, Revised: 25 October 2020, Accepted: 18 November 2020

Introduction

Permendikbud No. 28 of 2016 concerning Education Quality Assurance System of Basic and Secondary Education Quality Assurance is a mechanism that systematic, integrated, and sustainable to ensure education process relevant with quality standards [1]. The Ministry of Education and Culture through the Directorate General of Primary and Secondary Education develops and emphasizes that education units must apply the culture of quality education by the Internal Quality Assurance System (IQAS). The results of the routine evaluation of the Central Sulawesi Education Quality Assurance Institute (LPMP) regarding the implementation of IQAS on 27 senior high schools in Palu obtained preliminary data that the first cycle of mapping was done by 10.36% of educational units, the second cycle of planning was 9.32 %, while the third cycle of fulfillment quality was 7.25%, the fourth cycle evaluating the implementation of quality compliance was 2.7% and the fifth cycle (setting new quality standards) was 0%. In addition, the supervision of education quality on the components of understanding the standards and implementation IQAS also showed that IQAS not run as what expected and the report about stagnant SNP that generally some of them are declining, but the mapping to know the problem root is not conducted so that the attitude of actor of implementation seems refusing to accept changes about quality culture [2], [3].

These conditions are caused by the lack of implementers awareness about IQAS targets and benefits. In addition, the IQAS policy is not communicated well and there is refusal from the implementers, especially TPMPS, and lack of human resources who understand the objectives of IQAS implementation and lack of funds or incentives to support the achievement of these policy objectives. The IQAS policy can be implemented effectively, if the content and context are understood and be able to communicate with implementers [4]. The communication within the framework of implementation in informing the policy should be in consistency and uniformity of many resources so there is no obstacle in its process. If the source of different communication make interpretations that are inconsistent to content policy, or the same of information source show different so the implementers will find an event that is more difficult to implement intensive policy one day [5]–[7].

Therefore, the prospect of effective policy implementation is mostly determined by the communication to policy implementers accurately and consistently. Moreover, the coordination is a powerful mechanism for policy implementation. The better the communication coordination between the parties in policy implementation, the senior high schoolller the errors occur, and vice versa. The last thing to be considered in assessing policy implementation is the optimum effort of external environment to the success of public policies [8], [9].

The adverse social, economic, and political environment can be problem source for the failure of policy implementation. As impact, the efforts to implement policies must have conducive environmental conditions [10], [11]. Therefore, this study factors that influence policy implementation IQAS and strategies in efforts to accelerate the implementation of IQAS of senior high school in Palu .

The reason for choosing Palu as study location is due to the senior high school in Palu has not implemented IQAS according to the low percentage in each cycle and the presence of data in senior high school of Palu as initial information and there is no study previously regarding the implementation of the IQAS for senior high school in

Palu. This study aims to determine the factors that influence the implementation of policies of IQAS and strategies to accelerate IQAS implementation on senior high school in Palu .

Method

This study is quantitative approach to the design of *ex post facto* to assess the facts of past and no treatment or manipulation of variables on six senior high schools level in Palu as sample. The focus of this study is the IQAS Implementation Strategy for senior high school in Palu. The informants in this study were the school education quality assurance team (TPMPS) who understood the IQAS implementation . Data collection techniques used in this study, namely questionnaire, documentation, and interview to complement.

The data analysis techniques used in this study as following:

1. *Confirmatory Factor Analysis* (CFA) supported by *SPSS version 26* to identify the factors associated with large variables. The variables in one factor have a high correlation, while the correlation with variables in other factors is relatively low so that factors that have high correlation are identified as the dominant factor in the IQAS implementation at senior high school in Palu .
2. The analytic hierarchy process (AHP) method help to solve complex problems by determining criteria arranged in hierarchy and assigning numerical weight values as a substitute for human views or perceptions. By providing the synthesis, the priority scale for each alternative can be identified well.

Results And Discussion

IQAS Implementation Factors

There are some assumptions that capable to determine whether or not the factor analysis can be conducted, including in the observation of overall correlation matrix, the Bartlett's test of Spheri is needed to know the correlation among variables. If the results are significant, it means that the correlation matrix has significant correlation with variables [12]. This process can be seen in the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO-MSA) value.

Table 1 The Test Result of Keiser-Meyer-Olkin (KMO) and Bartlett Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.679
Bartlett's Test of Sphericity	Approx. Chi-Square	3028.522
	Df	1035
	Sig.	.000

Table 1 shows that the Bartlett's Test of Spheri obtained has Chi-Square value of 3352.881 (df 1035) and the sig = 0.000 <0.05, which means the Bartlett Test is fulfilled and the main component analysis can be conducted. KMO value is 0.652, the value is more than 0.50 so that it meets the requirements and is feasible for the benefit of factor analysis [12]. Therefore, the variables of this study can be analyzed further.

The next process is observing the *anti-image matrices* table in the anti-image correlation section to determine which variables to be included in the factor analysis. The exponent "a" in the anti-image matrices table (Appendix 5) indicates *measure of sampling adequacy* (MSA) value for each variable. The MSA value for each variable can be seen in the appendix.

The criteria for testing the value of *measure of sampling adequacy* (MSA), namely if the MSA is >0.5, the variable can still be predicted and can be analyzed further. If the MSA <0.5 variable cannot be predicted and cannot be further analyzed or items must be removed / reduced from other variables. Based on the MSA analysis above, the MSA value is more than 0.5 for all items . Therefore, further analysis can be conducted.

Table 2 Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.193	26.506	26.506	12.193	26.506	26.506	8.872	19.287	19.287
2	8.140	17.697	44.202	8.140	17.697	44.202	6.448	14.018	33.305
3	5.185	11.271	55.473	5.185	11.271	55.473	6.370	13.848	47.153
4	4.565	9.925	65.398	4.565	9.925	65.398	6.252	13.590	60.743
5	2.413	5.245	70.643	2.413	5.245	70.643	4.554	9.900	70.643

Extraction Method: Principal Component Analysis.

Table 2 shows the percentage of total diversity that can be explained by the diversity of factors. Based on the table above, it can be seen that there are 5 components / factors used. In the Rotation *Sums of Squared Loadings section*, there is % column of Variance that indicate the amount of diversity that can be explained by the formed factors. The amount of diversity can be explained by factor 1 about 19.287 percent, while the diversity can be explained by Factor 2 about 14.018 percent, Factor 3 about 13.848 percent, Factor 4 about 13.590 percent, and Factor 5 about 9.900 percent.

Moreover, to clarify the position of each variabel on each formed factor (principal component), a rotation process is conducted to have matrix component result of rotation as in the appendix. Factor rotation is done by using the varimax method that produces a *Rotated Component Matrix*. It can be seen that each variable has significant correlation with one factor only. The value contained in the rotation column above is the loading factor value.

The factor loading value shows the correlation between the item and the factor. Loading factors above 0.5 indicate the item is good indicator for factor. Based on the *Rotated Component Matrix* table, it can be seen that factor 1 consists of the components of the Content item (KN1-KN16), then factor 2 is the Resource item (SD1-SD7), factor 3 is the Context item component (KK1-KK9), factor 4 is the component of the Communication item (KO1 -KO8), and factor 5 is the Environmental component item of socio-political (L1-L6).

Table 3 The Factor Value of Loading Component Factor

No	Factor	Total Item	Code	Loading Factor	Variants (%)
1	Content	16	KN1	0.849	19.29
			KN2	0.812	
			KN3	0.873	
			KN4	0.729	
			KN5	0.759	
			KN6	0.710	
			KN7	0.805	
			KN8	0.731	
			KN9	0.710	
			KN10	0.595	
			KN11	0.615	
			KN12	0.735	
			KN13	0.507	
			KN14	0.764	
			KN15	0.644	
			KN16	0.580	
2	Context	9	KK1	0.812	13.85
			KK2	0.866	
			KK3	0.834	
			KK4	0.793	
			KK5	0.723	
			KK6	0.869	
			KK7	0.726	
			KK8	0.807	
			KK9	0.794	
3	Communication	8	KO1	0.920	13.59
			KO2	0.835	
			KO3	0.785	
			KO4	0.845	
			KO5	0.802	
			KO6	0.866	
			KO7	0.779	
			KO8	0.769	
4	Resources	7	SD1	0.911	14.02
			SD2	0.925	
			SD3	0.884	
			SD4	0.895	
			SD5	0.919	
			SD6	0.888	
			SD7	0.933	
5	Environment of Social Politics	6	L1	0.656	9.90
			L2	0.698	
			L3	0.709	
			L4	0.801	
			L5	0.781	
			L6	0.698	
	Total				70,64

Based on table 3, it is known that the content factor is the most dominant factor, due to it has the highest variant value, namely 19.29 %. This means that 19.29 % of respondents' perceptions of the IQAS implementation factors lead to more content factors. Next, it followed by the factors of Resources (14.01%), context (13.85%), Communication (13.59%) and the socio-political (9.90%). Totally, these five factors have the effect of 7 0.64% on the IQAS implemetation of senior high school in Palu.

Priority Factors of Objectives

AHP results at the first level has priority vectors from factors on factors of IQAS implementation acceleration for senior high school in Palu (Figure 1), the following priority order (weight): Content (0.320), Resources (0.166), Context (0.144), Communication (0.140), Socio-political environment (0.126).

Based on these results, the highest priority is the content factor and the lowest priority is the socio-political environment factor. The inconsistency value ratio on the criteria of factor is 0.045 that means the result of Analytic Hierarchy Process (AHP) is acceptable due to its inconsistency ratio less than 0.10 (10 percent) [13].

Actor's Priority at the Factor level

Priority of Actors in Content and Context Factors

The result of AHP analysis at the actor of content factor has priority vectors in IQAS implementation acceleration for senior high school in Palu, namely: TPMPD (0.280), Principal (0.215), Supervisor (0.169), Teacher (0.131), Parents (0.103), and Staff (0.098). Based on these results, the highest priority value is the TPMPD actor. The inconsistency of value ratio on comparison of actors above is 0.024 that means the result of *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent).

The result of AHP analysis at the actor of Context factor has priority vectors in the IQAS implementation acceleration for senior high school in Palu, namely: TPMPD (0.258), Principal (0.187), Supervisor (0.192), Teacher (0.132), Parents (0.120), and Staff (0.108). Based on these results, the highest priority value is the TPMPD actor. The inconsistency of value ratio on the comparison of actors above is 0.024 that means the result of *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) [14].

Priority of Actors in Communication and Resource Factors

The result of AHP analysis at the actor of Communication factor has priority vectors in the IQAS implementation acceleration for senior high school in Palu, namely: Principal (0.237), Supervisor (0.183), TPMPD (0.179), Teacher (0.169), Parents (0.118), and Staff (0.111). Based on these results, the highest priority score is the principal actor.The inconsistency of value ratio on the comparison of actor above is 0.032 that means the result of *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) .

The result of AHP analysis at the actor of Resource factor has priority vectors in the IQAS implementation acceleration for senior high school in Palu, namely: TPMPD (0.273), Supervisor (0.190), Principal (0.173), Teacher (0.169), Parents (0.173), and Staff (0.105). Based on these results, the highest priority value is the TPMPD actor. The inconsistency value ratio on the comparison of actors is 0.012 that means the result of *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) [15].

Priority of Actors in Socio-Political Environmental Factors

The result of AHP analysis at at the actor of socio-political environment factors has priority vectors in IQAS implementation acceleration for senior high school in Palu, namely: TPMPD (0.2738), Principal (0.1920), Supervisor (0.168), Teacher (0.128), Staff (0.125) and Parents (0.106). Based on these results, the highest priority value is the TPMPD actor. The inconsistency value ratio on the comparison of actor is 0.034 that means the result of *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) [16].

Alternative Priority in Actor Level

TPMPD actor

The result of AHP analysis at alternative level of TPMPD actor has priority vectors in IQAS implementation acceleration for senior high school in Palu, namely: technical guidance (0.418), mentoring (0.261), induction (0.195), stimulus funds (0.124). Based on these results, the highest priority value is technical guidance. The inconsistency value ratio on the comparison of actor is 0.034 that means the result of *Analysis Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) [17].

Supervisory Actor

The result of AHP analysis at alternative level of Supervisory actor has priority vectors in IQAS implementation acceleration for senior high school in Palu, namely: technical guidance (0.410), mentoring (0.256), induction (0.197), stimulus fund (0.135). Based on these results, the highest priority value is technical guidance. The inconsistency value ratio on the comparison of actor is 0.0 35 that means the result of *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) [18].

Principal Actor and Teacher

The result of AHP analysis at alternative level of principal actor has priority vectors in IQAS implementation acceleration for senior high school in Palu, namely: technical guidance (0.413), mentoring (0.259), induction (0.192), stimulus fund (0.134). Based on these results, the highest priority value is technical guidance. The inconsistency value ratio on comparison of actor is 0.030 that means *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) .

The result of AHP analysis at the alternative level of teacher actors has priority vectors in IQAS implementation acceleration for senior high school in Palu, namely: technical guidance (0.408), mentoring (0.260), induction (0.209), stimulus funds (0.120). Based on these results the highest priority value is technical guidance. The inconsistency value ratio on comparison of actor is 0.066 that means *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent).[19]

The staff and parents of students

The result of AHP analysis at the alternative level of Staff has priority vectors in IQAS implementation acceleration for senior high school in Palu, namely: technical guidance (0.352), mentoring (0.282), stimulus funds (0.206), induction (0.158). Based on these results, the highest priority value is technical guidance. The inconsistency value ratio on comparison of actor is 0.070 that means *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent).

The results of AHP analysis at the alternative level of students parents has priority vectors in in IQAS implementation acceleration for senior high school in Palu, namely: technical guidance (0.440), mentoring (0.246), induction (0.185), stimulus fund (0.126). Based on these result, the highest priority value is technical guidance. The inconsistency value ratio on comparison of actors is 0.0 43 that means *Analytic Hierarchy Process* (AHP) is acceptable due to its *inconsistency ratio* less than 0.10 (10 percent) [20].

Alternative Priority Synthesis Results

Based on the results of AHP analysis, it shows that the priority options to accelerate the implementation of IQAS for senior high school in Palu as following:

Graph	Alternative	Weight	Ranking
	Technical Guidance	0.4101	1
	Stimulus Fund	0.1368	4
	Accompaniment	0.2608	2
	Scaling	0.1923	3

Figure 1 Alternative Priorities

Figure 1 shows the alternative priority - 1st: Technical Guidance (0.410); 2nd priority:
Mentoring (0,260); 3rd priority: Induction (0.192) ; 4th priority: Stimulus Fund (0.136).

Conclusion

The factors that influence IQAS implementation at senior high school in Palu are content, context, communication, resources and the socio-political economy with the most dominant factor based on the content factor. The strategy to accelerate the implementation of IQAS for senior high schools in Palu is to provide IQAS technical guidance, mentoring, and induction.

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