

# Organizational Transformation of School of Meteorology Climatology and Geophysics and Its Impact to the Graduated Qualities

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Abstract: School of Meteorology, Climatology, and Geophysics (STMKG) is an official vocational school under the Meteorology, Climatology and Geophysics Agency (BMKG). STMKG originally called the Academy of Meteorology and Geophysics (AMG) changed its name and system from academy to school in accordance with the Republic of Indonesia Presidential Regulation Number 35 of 2014. These practical changes made various lines also change with expectations can support the performance of BMKG organizations to be better. This study aims to determine the quality of STMKG graduates who have worked in BMKG offices throughout Indonesia. The study was conducted by distributing questionnaires to the heads of offices that had recent STMKG graduates. The questionnaire obtained was then analysed to determine the level of quality of graduates. Based on these results, it is known that the quality of STMKG graduates is relatively good from various aspects of assessment, namely in terms of integrity and moral ethics, expertise based on education, the ability to use foreign languages, the ability to use information technology, communication skills, teamwork and self-development. This result certainly had an impact on the good BMKG services provided by STMKG graduates to the public. Based on these results, it can be concluded that AMG changes to STMKG support the performance of BMKG organizations for the better.

## 1 INTRODUCTION

The Meteorology, Climatology and Geophysics Agency (BMKG) is a non-ministerial government institution that has the main tasks and functions to carry out the tasks of carrying out government duties in the fields of Meteorology, Climatology, Air Quality and Geophysics in accordance with applicable laws. To carry out these tasks and functions, BMKG which is a central institution has operational offices in all regions in Indonesia. The majority of employees at BMKG offices are graduates of the College of Meteorology, Climatology and Geophysics (STMKG), which is an official school under BMKG. STMKG is a IV diploma school in the field of meteorology, climatology and geophysics which each graduate will be directly absorbed by BMKG.

Before becoming STMKG in 2014 based on the Republic of Indonesia Presidential Regulation Number 35 of 2014, STMKG was named the Academy of Meteorology, Climatology and Geophysics (AMG). This change is in view of the demand for educated and professional human resources in the fields of meteorology, climatology and geophysics to provide the best service of information related to meteorology, climatology and geophysics to the Indonesian people, namely quickly, precisely, broadly, easily understood.

The quality of human resources is indeed a very important capital in every line of life, especially development. Quality resources will certainly support the achievement of organizational goals to be able to work well according to mandated tasks and functions.

The change in AMG to become STMKG certainly helped change how the output of graduates,

who had previously only been observers, is now an analyzer in the fields of meteorology, climatology and geophysics. Not only that, in terms of quality, it is also expected that high school graduates of diploma IV level are better than before who are only at diploma level III.

Based on this background, the author tried to conduct research on how the quality of STMKG graduates was based on the assessment of the heads of BMKG offices throughout Indonesia where STMKG graduates worked.

## 2 THEORETICAL FRAMEWORK

Karen Coffman and Katie Lutes explain that change management is a structured approach to help organizations and people to transition slowly but surely from the present to the desired situation. Changes are certainly very necessary to answer the challenges of the objectives and adjust the work requirements that will be done. Organizational change is of course intended for organizations to be able to survive on time which continues to grow rapidly and so that organizational goals can be achieved optimally.

If previously as an academy with diploma level III, the school under BMKG was only able to issue graduates to become observers in the fields of meteorology, climatology and geophysics. Now with the transformation of organizations into high schools that also change parts including the structure of policy makers, learning curricula, and graduate graduation standards, of course this is indeed a need that must be fulfilled for the development of the service of the organization itself.

## 3 RESEARCH METHOD

The data in this study were obtained based on the distribution of questionnaires filled in by the Heads of UPT BMKG to STMKG graduates who had worked at each UPT throughout Indonesia. This questionnaire was filled out by the Heads of UPTs during the BMKG National Coordination Meeting on 25-28 April 2017 in Jakarta.

STMKG graduates who assessed their performance were the last two graduates, namely 2016 and 2017 STMKG graduates with the numbers presented in the table.

There are twenty-eight items of questions in the graduate performance questionnaire which must be answered by the leaders of UPT BMKG throughout

Indonesia. There are four assessment criteria to answer all questions in the questionnaire, namely (1) Less; (2) Enough; (3) Good; and (4) Very good with the symbols D, C, B, A respectively for these criteria. All twenty-eight questions were distributed into seven assessment categories with each assessment category consisting of four questions.

These 7 categories are based on graduate standards as used by the National Accreditation Board of Higher Education, including:

1. Integrity and Moral Ethics
2. Main Competence
3. English Language Ability
4. Ability to Use Information Technology
5. Communication Ability
6. Team Cooperation
7. Self Development

The results obtained based on this research are then presented statistically analysed qualitatively with a case study approach to find out and understand management after organizational changes at STMKG, so that they can find answers to what happened, why it happened and how it was confirmed by Finlay and Ballinger Qualitative research is research that can answer why and how an event occurs. In addition, this research is expected to find a management system after organizational change.

Analysis of data in qualitative research begins with preparing and organizing data, namely text data such as transcripts or image data such as photos for analysis, then reducing the data into themes through the coding and summarizing process and finally presenting data in the form of charts, tables or discussions.

## 4 ANALYSIS

Not all graduate performance questionnaires that are distributed get feedback from graduate users, in this case the leaders of upt bmkg throughout indonesia. Of the 349 graduates who will be assessed for their performance, only 251 graduates received feedback or only 71.92% with the details of each study program as follows.

Table 1: Graduate Feedback for each study program

No.	Study Program	Graduated Student	Feedback	Percent
1	Meteorology	214	154	71,96 %
2	Climatology	55	49	89,09 %

3	Geophysics	50	27	54,00 %
4	Instrumentation	30	21	70,00 %
	<b>Total</b>	<b>349</b>	<b>251</b>	<b>71,92 %</b>

Table 2: Graduate Performance Evaluation Table Meteorology Applied Bachelor Program

No.	Type of Ability	User Responses			
		A	B	C	D
		(%)	(%)	(%)	(%)
1	Integrity and Moral Ethics	29	63	7	1
2	Main Competence	16	72	11	1
3	English Language Ability	1	49	42	8
4	Ability to Use Information Technology	25	71	4	0
5	Communication Ability	14	74	11	1
6	Team Cooperation	16	70	13	1
7	Self-Development	17	16	13	5

Table 3: Graduate Performance Evaluation Table Climatology Applied Bachelor Program

No.	Type of Ability	User Responses			
		A	B	C	D
		(%)	(%)	(%)	(%)
1	Integrity and Moral Ethics	39	54	5	1
2	Main Competence	16	72	12	1
3	English Language Ability	9	46	42	3
4	Ability to Use Information Technology	35	58	7	0
5	Communication Ability	25	61	14	1
6	Team Cooperation	27	60	14	0
7	Self-Development	19	66	12	2

Table 4 : Graduate Performance Evaluation Table Geophysics Applied Bachelor Program

No.	Type of Ability	User Responses			
		A	B	C	D
		(%)	(%)	(%)	(%)
1	Integrity and Moral Ethics	38	59	3	0
2	Main Competence	26	72	2	0
3	English Language Ability	0	68	30	2
4	Ability to Use Information Technology	44	54	1	1

5	Communication Ability	10	90	0	0
6	Team Cooperation	18	76	6	0
7	Self-Development	32	65	3	0

Table 5 : Graduate Performance Evaluation Table Instrumentation Applied Bachelor Program

No.	Type of Ability	User Responses			
		A	B	C	D
		(%)	(%)	(%)	(%)
1	Integrity and Moral Ethics	46	42	12	0
2	Main Competence	0	91	8	1
3	English Language Ability	1	62	36	0
4	Ability to Use Information Technology	39	61	0	0
5	Communication Ability	26	69	10	0
6	Team Cooperation	28	62	10	0
7	Self-Development	16	75	7	1

## 5 RESULTS

The percentage tables above show that the output of STMKG graduates in the four study programs currently working in all UPTs in Indonesia is considered to have good performance, even very good, based on the questionnaire submitted by graduate users in this case the head of the office concerned.

The good performance provided includes seven aspects above which spread over 28 questions should reflect the quality of work of graduates in the field of meteorology, climatology and geophysics data to the community who previously only provided observational data when they graduated diploma III, so now has been able to provide observational data coupled with analysis and recommendations which of course is very beneficial for the organization and the wider community.

## 6 CONCLUSIONS

The organizational change from AMG to STMKG has certainly resulted in changes in terms of mindset, goals, work mechanisms, and expected output of the organization, which are better than before. Based on findings of this research, these changes had a

positive impact on BMKG because it managed to improve the quality of STMKG graduates in a sustainable manner. Such an improvement is evident from the increasing ability of STMKG graduates to complete and perform BMKG's tasks and functions quickly, precisely, effectively, and efficiently so as to help improve its quality and performance.

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